

11:50

13/6 mb 020

THE UNIVERSITY
OF ILLINOIS
LIBRARY

315.4
In 2
v. 7.

REFERENCE

BOOK

The person charging this material is responsible for its return to the library from which it was withdrawn on or before the **Latest Date** stamped below.

Theft, mutilation, and underlining of books are reasons for disciplinary action and may result in dismissal from the University.

To renew call Telephone Center, 333-8400

UNIVERSITY OF ILLINOIS LIBRARY AT URBANA-CHAMPAIGN

MAR 26 1987

May 19

OCT 21 1987

LIBRARY
UNIVERSITY OF ILLINOIS
URBANA

Wellington

Plates, Papers, Chemicals

have become world-famous for their quality and uniformity. They are made in a long range for photographic work of all kinds and are capable of withstanding tropical heat and damp.

The *Wellington* Photographic HAND-

BOOK contains full instructions for the making of Negatives, Prints, Lantern Slides and Enlargements. It is a volume of 140 pages, well bound and profusely illustrated.

Price : Re. 1 net from all Dealers or post free from

WELLINGTON & WARD

Cook's Building, Hornby Road,
BOMBAY.

Works : Elstree, England.

Branches at

CALCUTTA, LONDON, PARIS.

VENUS PENCILS

FOR EVERY PENCIL PURPOSE.

"VENUS PENCILS" are the standard of the world, and their reputation for smoothness, true grading, and adaptability for every purpose, has been established for years. Every stroke of a VENUS is a demonstration of VENUS' magnificent quality and explains why VENUS PENCILS are recognised as the world's standard for quality.

17 Grades Blacklead, 6B (Softest) to 9H (Hardest), also 3 styles Copying.

Of all high-class Stationers and

"VENUS" 173-5, Lower Clapton Road, E. 5
LONDON, ENGLAND.



FRAME & Co.

(G. Macgregor Frame.)

(Stephen Ewen.)

Established : GLASGOW, 1888. LONDON, 1890. NEW YORK, 1892.

WORLD-WIDE MERCHANTS,
21, Mincing Lane, LONDON, E.C. 3

Tel. Add. : "Framezzo, London." All Usual Codes.

IMPORTERS

COCOA, SUGAR, COFFEE, COTTON, COPRA,
 HIDES, PEPPER, CLOVES, GINGER and all
 SPICES.

HONEY, BEESWAX, RUM, PALM OIL, PALM
 KERNELS, RICE, SAGO, TAPIOCA and all
 CEREALS.

COTTON SEED, DIVI-DIVI, RUBBER,
 BALATA, CARNAUBA WAX, TIN and all
 METALS, WOODS of all kinds and all TROPICAL
 PRODUCE.

EXPORTERS

STORES, FOOD STUFFS, HARDWARE,
 MACHINERY and GENERAL MERCHANDISE.

SUPPLIERS TO FOREIGN GOVERNMENTS. LETTERS
 OF CREDIT OPENED AGAINST CONSIGNMENTS.

Correspondents in New York :

FRAME & CO.,
90-96, Wall Street, NEW YORK.

Cable Address : "ADVANCE, NEW YORK."

INTERNATIONAL BANKING CORPORATION.

HEAD OFFICE :—NEW YORK.

Capital Paid-up	...	...	G. \$3,250,000
Reserve Fund	...	...	G. \$3,250,000
Undivided Profits	...	...	G. \$3,055,000

LONDON OFFICE :—36, BISHOPSGATE, E.C.

BRANCHES :

BOMBAY.	LONDON.	SANTIAGO DE LOS
BATAVIA.	LYONS.	CABALLEROS.
CALCUTTA.	MANILA.	SANTO DOMINGO.
CANTON.	MEDELLIN.	SHANGHAI.
CEBU.	PANAMA.	SINGAPORE.
COLON.	PEKING.	SOURABAYA.
HANKOW.	PUERTO PLATA	TIENTSIN.
HARBIN.	RANGOON	TSINGTAO.
HONGKONG.	SAN FRANCISCO.	YOKOHAMA.
KOBE.	SAN PEDRO DE MA- CORIS.	

Through its close affiliation with **The National City Bank of New York**, the Bank is able to offer the special services of the Branches of that institution in all the important towns in Cuba and South America.

Current Deposit Accounts opened, on which interest is allowed at 2 per cent. per annum on Daily Balances from Rs. 1,000 up to Rs. 1,00,000.

Fixed Deposits received for 12 months and for shorter periods on terms which may be ascertained on application.

General Banking and Exchange business throughout the world.

Special Facilities for Business with America.

H. A. W. BRENT,

Manag

BOMBAY OFFICE :—42-48, CHURCH GATE STREET.

THE YOKOHAMA SPECIE BANK, LD.

(REGISTERED IN JAPAN.)
(ESTABLISHED 1880.)

SUBSCRIBED CAPITAL	...	YEN	48,000,000
PAID-UP CAPITAL	...	,,	42,000,000
RESERVE FUND	..	,,	25,000,000

Head Office : YOKOHAMA.

BRANCHES :

BOMBAY, BATAVIA, BUENOS AIRES, CALCUTTA,
CHANGCHUN, DAIREN, FENGTIEN, HANKOW,
HARBIN, HONGKONG, HONOLULU, KAI-YUAN,
KOBE, LONDON, LOS ANGELES, LYONS,
MANILA, NAGASAKI, NEWCHWANG, NEW YORK,
OSAKA, PEKING, RANGOON, RIO DE JANEIRO,
SAN FRANCISCO, SEATTLE, SHANGHAI, SHIMO-
NOSEKI, SINGAPORE, SOURABAYA, SYDNEY,
TIENTSIN, TSINAN, TOKYO, TSINGTAU, VLADI-
VOSTOCK.

Current Deposit Accounts are opened for approved customers, and Interest is allowed at the rate of 2 per cent. per annum on daily balances of Rs. 1,000 up to Rs. 1,00,000, provided that the amount of half-yearly interest is not less than Rs. 5.

Fixed Deposits are received for one year or shorter period on terms which may be ascertained on application.

Every description of Banking and Exchange business transacted.

Post Box No. 207,
Hornby Road, Bombay.

Post Box No. 406,
Clive Street, Calcutta.

Post Box No. 584,
Strand Road, Rangoon.

T. AIZAWA,
Manager, Bombay.

I. NISHIMAKI,
Manager, Calcutta.

M. SUZUKI,
Manager, Rangoon.

THE BANK OF TAIWAN, LTD.

Incorporated by Special Charter of the Imperial
Japanese Government, 1899.

Subscribed Capital ...	...	...	...	...	Yen	60,000,000
Paid-up Capital ...	...	...	...	...	„	37,500,000
Reserve Fund ...	...	...	...	...	„	7,530,000

HEAD OFFICE : Taipeh, Formosa.

BRANCHES & AGENTS :

London	Hamburg	Osaka
New York	Shanghai	Kobe
Amoy	Hongkong	Yokohama
Canton	Singapore	Ako
Foochow	Soerabala	Giran
Hankow	Semarang	Kagi
Kiukiang	Batavia	Karenko
Swatow	Bokoto	Keelung
Tainan	Taitoh	Tamsui
Takow	Shinchiku	Towen.
Moji	Taichu	Nanto
San Fransisco	Bangkok	
Lyon	Tokio	

The Bank has also a large number of Correspondents at Home and Abroad.

Current Deposit Accounts opened, **Fixed Deposits** received on terms which may be ascertained on application.

Every description of **Banking** and **Exchange** business transacted.

K. TAKEMURA,
Manager.

56, Esplanade Road,
FORT, BOMBAY.

Post Box No 477.

Telephone No. { 4204
499.

Telegraphic Address :—"Taiwangink", Bombay.

BANK OF BOMBAY.

CAPITAL PAID UP	...	...	Rs. 1,00,00,000
RESERVE FUND	...	...	Rs. 1,10,00,000

Head Office : BOMBAY.

BRANCHES :

AHMEDABAD.

Do. (City Sub-Branch).

AKOLA.

AMRAOTI.

BOMBAY CITY

SUB-BRANCHES—

BYCULLA.

MANDVI.

SANDHURST ROAD.

BROACH.

HYDERABAD (Sind).

INDORE.

JALGAON.

KARACHI.

POONA.

QUETTA.

RAJKOT.

SHOLAPUR.

SUKKUR.

SURAT.

CURRENT ACCOUNTS—Opened free of charge.

FIXED DEPOSITS—Received for twelve months and also for short periods during the busy season and interest allowed thereon at rates which may be ascertained on application.

SAVINGS BANK DEPOSITS—Received and interest allowed thereon at four per cent. per annum.

LOANS AND CASH CREDITS—Granted on the security of Government Securities, Municipal and Port Trust Debentures, City of Bombay Improvement Trust Debentures, Shares in Guaranteed Railways, Goods and Bullion.

DISCOUNT ACCOUNTS—Opened and approved Mercantile Bills discounted.

GOVERNMENT AND OTHER SECURITIES—Received for safe custody. Purchases and Sales effected and Interest and Dividends collected.

Copies of Rules, Powers of Attorney, &c., may be had on application at the Head Office or at any of the Branches.

R. AITKEN,

Secretary and Treasurer.

CHARTERED BANK OF INDIA.

AUSTRALIA AND CHINA,

38, Bishopsgate, LONDON.

Incorporated by Royal Charter.

CAPITAL	...	...	...	...	£2,000,000
RESERVE FUND	...	...	...	...	£2,900,000

COURT OF DIRECTORS:

Sir MONTAGU CORNISH TURNER, Chairman.
 Sir DUNCAN CARMICHAEL.
 THOMAS CUTHBERTSON, Esq.
 Sir ALFRED DENT, K.C.M.G.
 WILLIAM HENRY NEVILLE GOSCHEN, Esq.
 The Right Hon. LORD GEORGE HAMILTON, G.C.S.I.
 WILLIAM FOOT MITCHELL, Esq.
 J. M. G. PROPHIT, Esq.
 LEWIS ALEXANDER WALLACE, Esq.
 T. H. WHITEHEAD, } *Managers.*
 T. FRASER, }
 W. E. PRESTON, *Sub-Manager.*

AGENCIES AND BRANCHES:

AMRITSAR
 BANGKOK
 BATAVIA
 BOMBAY
 CALCUTTA
 CANTON
 CEBU
 COLOMBO
 DELHI
 HAIPHONG
 HANKOW
 HONG KONG

ILOILO
 IPOH
 KARACHI
 KLANG
 KOBE
 KUALA LUMPUR
 MADRAS
 MANILA
 MEDAN
 NEW YORK
 PEKING
 PENANG

PUKET
 RANGOON
 SAIGON
 SEREMBAN
 SHANGHAI
 SINGAPORE
 SOURABAYA
 TAIPING (F.M.S.)
 TAVOY
 TIENTSIN
 YOKOHAMA

BANKERS

THE BANK OF ENGLAND.
 THE LONDON JOINT CITY AND MIDLAND BANK, LIMITED.
 THE LONDON COUNTY, WESTMINSTER AND PARIS BANK, LIMITED.
 THE NATIONAL PROVINCIAL AND UNION BANK OF ENGLAND, LIMITED.
 THE NATIONAL BANK OF SCOTLAND, LIMITED.

The Corporation buy and receive for collection Bills of Exchange, grant Drafts payable at the above Agencies and Branches, and transact general Banking business connected with the East. Deposits of money are received for fixed periods at rates which may be ascertained on application; interest payable half-yearly, 30th June and 31st December. On Current Accounts interest is allowed at 2 per cent. per annum on the minimum monthly balances provided they do not fall below £200.

THE SUMITOMO BANK, LIMITED.

(Incorporated in Japan.)

Subscribed Capital	...	...	Yen	3,00,00,000
Paid-up Capital	...	...	,,	26,250,000
Reserve Fund	...	...	,,	6,350,000

Head Office—OSAKA.

Branches and Agencies.

Bombay	Kurume	San Francisco
Hakata	Kyoto	Shanghai
Hankow	London	Seattle
Hiroshima	Moji	Shimonoseki
Honolulu	Nagoya	Tokyo
Hyogo	New York	Yanai
Kobe	Niihama	Yokohama
Kokura	Onomichi	Wakamatsu
Kure	Osaka	

Current Deposit Accounts opened and Fixed Deposit
received at rates to be ascertained on application.

Every description of Banking and Exchange Business
transacted.

J. SATO,
Manager.

12, CHURCH GATE ST., FORT, BOMBAY.

Post Box No. 389.

NATIONAL BANK OF INDIA, LTD.

ESTABLISHED IN INDIA, 1863.

(Incorporated in the United Kingdom.)

Registered in London under the Companies Act of 1852 on the 23rd March 1866.

Bankers to the Government in British East Africa and Uganda.

Authorised Capital—Four Millions Sterling.

Subscribed Capital	...	...	...	...	£ 3,000,000
Paid-up Capital	...	...	...	...	£ 1,500,000
Reserve Fund	...	...	...	...	£ 1,850,000

Head Office—26, Bishopsgate, London, E.C. 2.

BRANCHES.

Calcutta, Bombay, Madras, Karachi, Lahore, Amritsar, Delhi, Cawnpore, Tuticorin, Cochin, Chittagong, Rangoon, Mandalay, Colombo, Kandy, Newera Eliya, Aden Steamer Point (Aden), Zanzibar, Mombasa, Nairobi, Nakuru, Kisumu, Jinja, Kampala, Entebbe, Darassalam, Tanga.

AGENCIES.

EDINBURGH—MONCRIEFF & HORSBURGH, 46, CASTLE STREET.

GLASGOW—MESSRS. MACKENZIE, ROBERTON & Co., 176, ST. VINCENT STREET.

GALLE (CEYLON)—MESSRS. CLARK SPENCE & Co.

BOARD OF DIRECTORS.

ROBERT CAMPBELL, Esq., Chairman.

ROBERT WILLIAMSON, Esq., Deputy Chairman.

SIR C. C. MCLEOD, Kt.

ALFRED SIMSON, Esq.

SIR JOHN P. HEWETT, G.C.S.I., C.I.E.

J. N. STUART, Esq.

ROBERT MILLER, Esq.

J. A. TOOMEY, Esq.

GENERAL MANAGER, LONDON—H. CHALMERS, Esq.

LONDON MANAGER—C. NICOLL, Esq.

LONDON BANKERS.

BANK OF ENGLAND, NATIONAL PROVINCIAL & UNION BANK OF ENGLAND, LD
AND NATIONAL BANK OF SCOTLAND, LD.

AGENTS IN SCOTLAND.

BRITISH LINEN BANK AND NATIONAL BANK OF SCOTLAND, LD.

AGENTS IN IRELAND.

PROVINCIAL BANK OF IRELAND, LD.

RULES OF BUSINESS OBSERVED AT BOMBAY.

EXCHANGE.

Bills of Exchange payable in the Principal Cities of Europe, India, Africa, America, and Australia purchased and collected. Drafts issued at the exchange of the day on the Bank's Head Office, Branches and Correspondents. Instructions respecting Family Remittances are carefully attended to, and, when the necessary particulars are furnished, the Bank will forward first copy of the Bill direct to the parties in England. Remittances may also be sent by telegram.

CURRENT DEPOSIT ACCOUNTS.

The Bank opens Current Deposit Accounts, and allows Interest at the rate of 2 per cent. per annum on sums from Rs. 1,000 up to Rs. 1,00,000.

FIXED DEPOSIT.

The Bank receives money on Fixed Deposit on terms which may be learned on application.

AGENCY.

The Bank undertakes, on behalf of its constituents, the safe custody of Shares and Securities, charging on redelivery a commission of one-quarter per cent. on the nominal value. Dividends and interest are collected subject to a charge of one-quarter per cent. on the amount realised. Government paper and all descriptions of Stocks purchased and sold, the Commission charged on such transactions being one-quarter per cent. on the amount invested or realised.

All remittances should be made payable to the Manager, National Bank of India, Ltd., who will be glad to afford any further information respecting the Bank's business.

RALPH KIDD, Manager.

NATIONAL BANK OF INDIA, LIMITED,

BOMBAY.

Post Box No. 141.

Hongkong and Shanghai Banking Corporation.

(INCORPORATED IN HONGKONG.)

Paid-up Capital	...	...	...	...	\$15,000,000
Reserve Liability of Proprietors	...	...	...	...	\$15,000,000
Silver Reserve Fund	...	...	...	...	\$23,000,000
Gold Reserve Fund	...	...	...	...	£1,500,000

**COURT OF DIRECTORS AND HEAD OFFICE
IN HONGKONG.**

ADVISORY COMMITTEE IN LONDON.

BRANCHES :

AMOY.	IPOH.	RANGOON.
BANGKOK.	JOHORE.	SAIGON.
BATAVIA.	KOBE.	SAN FRANCISCO.
BOMBAY.	KAWALA LUMPUR.	SHANGHAI.
CALCUTTA.	LONDON.	SINGAPORE.
CANTON.	LYONS.	SOURABAYA.
COLOMBO.	MALACCA.	TAIPEH.
DALNY.	MANILA.	TIENTSIN.
FOOCHOW.	NAGASAKI.	TSINGTAU.
HANKOW.	NEW YORK.	VLADIVOSTOCK.
HARBIN.	PEKING.	YLOILO.
HONGKEW.	PENANG.	YOKOHAMA.
HONGKONG.		

Current Deposit Accounts.

Interest allowed at 2 per cent. per annum on Daily Balances of Rs. 1,000 to Rs. 1,00,000 provided the sum accrued amounts to Rs. 5 half-yearly.

Fixed Deposits.

Are received for varying periods up to 12 months on terms which may be ascertained on application. Drafts granted on London and the Chief Commercial places in Europe, India, Australia, America, China, and Japan.

Credits granted, Bills purchased and every description of Banking and Exchange business transacted.

THE MERCANTILE BANK OF INDIA, LTD.

(Incorporated in England.)

Subscribed Capital...	..	...	£ 1,500,000
Paid-up Capital	...	...	£ 750,000
Reserve Fund	...	...	£ 700,000

BOARD OF DIRECTORS.

R. J. BLACK, ESQ. (<i>Chairman</i>).	JOHN M. RYRIE, ESQ.
LORD CARMICHAEL, G.C.S.I., G.C.I., K.C.M.G.	H. MELVILL SIMONS, ESQ.
P. R. CHALMERS, ESQ.	SIR DAVID YULE.
P. MOULD, <i>Chief Manager</i> .	

The Bank receives Money on Deposit, buys and sells Bills of Exchange, issues Letters of Credit and Circular Notes, and transacts all kinds of Banking and Agency business on terms which can be ascertained on application.

BRANCHES AND AGENCIES :

BANGKOK.	HONGKONG.	MADRAS.
BATAVIA.	HOWRAH.	MAURITIUS.
BOMBAY.	KANDY.	PENANG.
CALCUTTA.	KARACHI.	RANGOON.
COLOMBO.	KOTA BHARU	SHANGHAI.
GALLE.	KELANTAN.	SINGAPORE.
DELHI.	KUALA LUMPUR.	

FROMY, ROGÉE & CO.,

St. Jean d'Angely
Cognac (France)

MAISON
CENTENAIRE.

Agents :

GILMAN & CO.,
P. O. Box 432,
Bombay.

LOKUMAL & Co.
Dunolly Road,
Karachi.



Registered
Specialities.

Medical Reserve

THE

Dry Brandy

Medical Liqueur

THE

Ideal Liqueur

Large stocks
of every Vintage

Telegrams :—

"CHEMICOLOR," Bombay.
"TINCTORIAL," Calcutta.
"CHEMICOLOR," Madras.
"CHEMICOLOR," Delhi.

Bombay :

Telephone 3642 & 2331

K. H. KABBUR & Co.,

(K. H. KABBUR)

56, Esplanade Road, Fort, BOMBAY,
95, Clive Street, CALCUTTA.

and

21, Second Lines Beach, MADRAS, G. T.

30, Brown Street, Manchester.

P.O. B. 1311. Alexandria.

21, Mincing Lane, London, E. C. 3

2, Rue Meyerbier, Paris,

and also at BARCELONA, MILAN & NEW YORK.

Dealers and Importers of

All Varieties of Genuine Dye Stuff required for Cotton, Silk, Jute, Straw
Paper, Leather and other Industries, Food and Lake Colours,
Heavy Chemicals and Pharmaceutical Products.

Apply for a complete list and free samples.

Wilkinson, Heywood & Clark, Ltd.,

LONDON.



Established 1796.



Manufacturers of

Varnishes, Enamels,
Distemper, Paints, etc., etc.

for all purposes, specially
prepared for the Indian climate.



*Agents for INDIAN GOVERNMENT
TURPENTINE AND ROSIN.*



Large stocks held in India.



BOMBAY BRANCH:

Oriental Bldgs., Fort, BOMBAY.

MUIR

Manufactures are renowned for
Durability, Reliability and
Comparative Cheapness.

The following are available in a large assortment
and variety :—

Canvas.
Carpets.
Casement Cloths, all colours.
Ceiling Cloths.
Chowka.
Clothing.
Cords, Riding.
Counterpanes.
Cricket Screens.
Dammer.
Dosutis, all colours.
Drill, White and Khaki.
Druggets, Dancing.
Durries.
Dusters.
Farash.
Flannelettes.
Ground Sheets.
Haversacks.
Holdalls.
Horse Bandages.
Horse Clothing.
Indigo Sheetings.
Jharans.
Kit Bags.
Kullah Caps.
Mattresses.
Newar.
Paulins.

Pillow Cases.
Press Cloths.
Pugrie Cloths, white and
coloured.
Pugrie Fringes.
Punkha Frills.
Purdahs, Durrie.
Ropes.
Serviettes.
Sheetings, all colours.
Sheets, Bed.
Sheets, Table.
Shirtings.
Soiled Clothes Bags.
Stable Requisites.
Syces Suits.
T. Cloths.
Table Cloths.
Tennis Screens.
Tents.
Tickings, Bed.
Toilet Cover Material.
Towels, Turkish, Honey-
comb and Huckaback.
Twills, White, Striped and
Khaki.
Valises.
Webbing.

**Muir Mills Company, Ltd.,
Cawnpore.**

THE TAJ MAHAL HOTEL, BOMBAY.

Specially adapted for an Eastern climate and situated in the most fashionable and healthiest part of Bombay, overlooking the beautiful harbour, and open to the sea breezes.



TAJ MAHAL HOTEL FROM THE HARBOUR.

The Hotel Orchestra plays daily. The only place for fashionable entertainments and dinners.

An experienced first-class French Chef controls the Kitchen Department.

Although every comfort is provided the tariff is most moderate.

Daily Rates from Rs. 10

Monthly Rates from „ 270

Rates for Permanent Residents on application to management.

GREEN'S RESTAURANT UNDER THE SAME MANAGEMENT.

THE INDIAN HOTELS CO., LTD.,
BOMBAY.

H. M. MEHTA & Co.,

Large Importers in complete line of Mills Stores, Spinning and Weaving Machineries, Engines, Boilers, Paints, Oils, Lubricants, Hardwares, Electrical Goods, Ediphone Machines, Novelties and Miscellaneous Sundries.

Chief Exporting House for Raw Cotton, Yarn, Hides and Skins, Sheeting and various Indian Products.

Big Cotton Commission Agents.

Dealers of Motor Cars, Lorries, Motor Cycle, Tyres, Tubes and Accessories.

Managers and Agents for:—

The Mills Stores Trading Co. of India, Ltd.

T. R. Pratt (Bombay), Ltd.

The British India General Insurance Co., Ltd.

The Zenith Life Assurance Co., Ltd.

The London and Lancashire Fire Insurance Co., Ltd.

Gresham Fire Insurance Co., Ltd.

The Cromptons (Bombay), Ltd.

The Jubilee Mills, Ltd.

The Victoria Mills, Ltd.

The Raja Gokuldas Mills, Ltd.

H. M. MEHTA & Co.,

123, Esplanade Road, BOMBAY.

GREAVES COTTON & CO.,

MECHANICAL & ELECTRICAL

.. ENGINEERS ..

B O M B A Y

Complete equipment for :—

**COTTON SPINNING & WEAVING MILLS.
BLEACHING WORKS, DYEING WORKS.
COTTON GINNING & PRESSING FACTORIES.
ROLLER FLOUR MILLS.
ICE MAKING & REFRIGERATING PLANTS.
SAW MILLS, OIL MILLS.
WATER WORKS & PUMPING PLANTS.
ELECTRICAL INSTALLATIONS.**

Large Stock held in Bombay of :—

**STEAM, GAS & OIL ENGINES, BOILERS, ROAD
ROLLERS, COTTON GINS & GIN SUNDRIES, PUMPS,
FLOUR MILLS, RICE HULLERS, COTTON DRIVING
ROPES, BELTING, ELECTRICAL ACCESSORIES OF
EVERY DESCRIPTION, Etc., Etc.**

PRICES ON APPLICATION.

BOMBAY

Messrs. HOWARD & BULLOUGH, Ltd., ACCRINGTON.
” HENRY LIVESEY, Ltd., BLACKBURN.
” THE BRITISH NORTHROP LOOM Co., Ltd.,
BLACKBURN.
” MATHER & PLATT, Ltd., MANCHESTER.
” WILLIAM TATHAM, Ltd., ROCHDALE.
” JOSEPH SYKES BROS., Ltd., HUDDERSFIELD.
” RUSTON & HORNSBY, Ltd., LINCOLN.
” TINKER SHENTON & Co.,
HYDE (NEAR MANCHESTER).
” YATES & THOM, Ltd., BLACKBURN.
” THE LIGHTFOOT REFRIGERATION Co., Ltd.,
LONDON.
” E. R. & F. TURNER, Ltd., IPSWICH.
” FRANK PEARN & Co., Ltd., MANCHESTER.
” DRUM ENGINEERING Co., Ltd., BRADFORD.
” HYDRAULIC ENGINEERING Co., Ltd., CHESTER.
” GEO. HATTERSLEY & SONS, Ltd., KEIGHLEY.
” WILLIAM KENYON & SON, Ltd., DUKINFIELD.
” BELLS ASBESTOS Co., Ltd., LONDON.
” HEENAN & FROUDE, Ltd., WORCESTER.

RICHARDSON & CRUDDAS

STRUCTURAL -

MECHANICAL -

SANITARY - -

ENGINEERS -

**The Largest Engineering
Firm in Western India.**

**BYCULLA IRONWORKS,
BOMBAY.**

Marsland, Price & Co., Ltd.,

Nesbit Road, Mazgaon, Bombay.

Reinforced Concrete Specialists,
Sanitary and Constructional
Engineers.

Cast, Wrought and Mild steel work
of any description; Sanitary and
Conservancy appliances; Bridges,
Girders, Roofs, Water tanks and
Structural work undertaken in any
part of India.

Agencies :—

Reinforcing Materials.

Twyford's Sanitary Fittings.

The Curry Bag Tyer.

Steele-Crete (The Master Builders'
Concrete Hardener.)

Pioneer Rubber Flaxine Roofing.

Ask for free pamphlet "The Floor" for Hardwear.

Telegrams :—"SANITARIAN," Bombay, Byculla.

Code Used :—A.B.C. 5th Edition. Telephone :—No. 875.

G.L.C.

Geo. SERVICE & Co.,

BOMBAY.

**6,000 TONS
STOCKED.**

STEEL BEAMS

Also
Steel Angles,
Tees, Channels,
Cast Iron Pipes,
Sheets, Ruberoid Roof-
ing and Anti-corrosive
Paints.

THE CHEAPEST HOUSE

For Electrical and
Engineering Goods.

Send us your Enquiries or call at

**THE ORIENTAL ENGINEERING
AND TRADING COMPANY,**
Ravelin Street, Hornby Road, BOMBAY.

Tangye's Oil, Crude Oil and Suction
Gas Engines.

LIPTON'S PROVISIONS

ALL GOODS BEARING OUR LABEL GUARANTEED

TEA

COFFEE

COCOA

PICKLES

JAMS

SAUCES

FISH

VINEGAR

BISCUITS

OIL

FRUITS

SUNDRIES

ADDRESS :—

LIPTON, Ltd.,

Lipton's Buildings,

BOMBAY.

ALSO—

CALCUTTA—Post Box 44.

KARACHI—Post Box 68.

MADRAS—Second Line Beach.

BUSRAH—34, Kashla Road, Ashar.



There are more than two million and a quarter Ford cars in service to-day.

The Ford is the lightest car for its power made—and lightness is an absolute essential for economy in maintenance and for comfort in riding. It weighs several hundred pounds less than the ordinary car of the same power and carrying capacity. It puts more tyre surface on the ground per pound of car than any other. And its lightness is also a big safety factor.

Lightness minimizes the cost of up-keep by reducing the wear and tear on the tyres—by giving more mileage per gallon of gasoline—and by lessening the strain and stress upon the car itself. Tyres for Ford cars are comparatively inexpensive, because large ones are not required—and they give maximum service because the car is lightest. Ford owners have a minimum of tyre troubles and other expenses—and that's a big factor to consider in the buying of a car.

If you have ever experienced the pleasurable difference between riding in a bullock cart and a light buggy, then you will appreciate what lightness in weight means as a factor for comfort in a motor car.

It is surprisingly low in price—and surprisingly high in value—because it is produced upon a scale so gigantic as to reduce the cost of manufacturing and distributing to a minimum.

There is one outstanding reason why the Ford car so far outsells all others.

It is the finest car value in the world.

We can offer the following Models :—

2-seater Runabout	Rs. 2,600	5-seater Sedan	Rs. 3,750
4 " Touring	" 2,750	Standard Chassis	" 2,300
2 " Coupe	" 3,450	One-ton Chassis	" 3,000

FORD AUTOMOBILES

(INDIA), LTD.,

Ford Buildings, Hughes Road, Bombay.

Telegrams :—AUTOFORD.

H. I. DIXON & Co., LTD.,

BOMBAY.

DIXON'S ENGINEERING WORKS.

Established 1886.

ON GOVERNMENT LIST.

Fort Office:—

JAMES MACKINTOSH & Co.,

Secretaries and Treasurers,

17, 18, Elphinstone Circle,

Telephone No. 786.

Mazagon Works:—

MAZAGON ROAD,

Telephone No. 2154.

Branch Factory:—

Hospital Lane, MAZAGON.

Telegrams:—"NOXID," BOMBAY.

Scott's 10th Edition and A. B. C. 5th Edition.

**Constructional and General Engineers,
Shipbuilders, Boilermakers, Shipwrights,
Iron and Brass Founders and Millwrights.**

**Suppliers of all kinds of Machinery and Stores for
Ships, Mills and Works.**

Licensees for Alexandra and Merewether Dry Docks.

Estimates given for Docking and Painting.

**Agents for Storry Smithson's "ECONOMIC" Anti-
Fouling and Anti-Corrosive Compositions.**

ESTABLISHED 1887.

W.

CROWDER

&

Co.,

Ltd.

**HARDWARE, OILS,
PAINTS, VARNISHES,
CANVAS, PAULINS,
WAGON COVERS,
WIRE AND
MANILA
ROPES.**



**HOSE,
WAGON &
CARRIAGE
FITTINGS, WOOD,
BOILER PRESERVA-
TIVES, PULLEYS,
BELTING.**

**BOMBAY,
CALCUTTA & KARACHI.**



1807.

The Eagle, Star & British Dominions INSURANCE COMPANY, LTD.

(Incorporated in England.)

HEAD OFFICE :—British Dominions House, Royal Exchange
Avenue, LONDON, E.C. 3.

CAPITAL AUTHORISED	...	...	...	£ 3,000,000
SUBSCRIBED	...	...	...	£ 2,653,425
PAID-UP	...	...	...	£ 747,896
ASSETS EXCEED	...	...	...	£ 16,700,000

BANKERS :— { THE BANK OF ENGLAND.
LONDON JOINT CITY & MIDLAND BANK, LTD.
LLOYDS BANK, LTD.
COUTTS & CO.

Fire, Marine and GENERAL INSURANCE



Business accepted at Lowest Current Rates.
Claims settled without reference to Head Office.
Surveys made free of charge.

For full particulars apply to—

ALEX. M. TOD,

Manager for India, Burma and Ceylon.

Standard Buildings, Hornby Road, BOMBAY.

 Branches and Agencies throughout the World. 

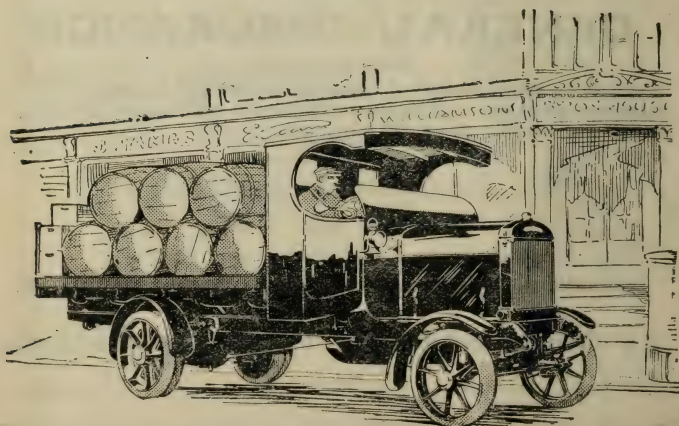
THORNYCROFT

Commercial and Public Service-Vehicles

From 1½ Tons to 5 Tons.

**Marine Oil Engines, 15 B.H.P. to
80 B.H.P., Stationary and Port-
able Oil Engines, Motor Boats
and all Types of Power Craft for
all purposes.**

**THORNYCROFT (India), Limited,
7, Old Court House Street, CALCUTTA.**



PRINTING

COUNTS



If

Originality

Distinctive Tone

and

Quality

are required

Consult

THE TIMES PRESS

BOMBAY

The Times of India
Illustrated Weekly

PUBLISHED EVERY WEDNESDAY.

Price 6 Annas.

Has the largest circulation of any Newspaper in
 India, Burma, Ceylon or any part of the East.

On sale at all Bookstalls and Agents.

PROPRIETORS—BENNETT, COLEMAN & Co, LTD.,
 BOMBAY, CALCUTTA AND LONDON.

UNITED STATES STEEL PRODUCTS COMPANY,

Importers of Structural Materials, Plates, Bars,
 Steel Piling, Wire, Wire Rope, Nails, Black and
 Galvanized Sheets, Black and Galvanized Pipes
 and all other classes of semi-finished steel.

Export Representatives of:—

GARNEGIE STEEL COMPANY.

NATIONAL TUBE COMPANY.

AMERICAN BRIDGE COMPANY.

ILLINOIS STEEL COMPANY.

TENNESSEE COAL, IRON & RAILROAD CO.

AMERICAN STEEL & WIRE CO.

AMERICAN SHEET & TIN PLATE CO.

LORAIN STEEL COMPANY.

SHELBY STEEL TUBE COMPANY.

MINNESOTA STEEL COMPANY.

Bombay Office:—Queen's Mansions, 56, Bastion Road, Fort.

Calcutta Office:—McLeod House, 28, Dalhousie Square.

London Office:—Egypt House, 36, New Broad Street, E.C.

Home Office:—30, Church Street, New York, U. S. America

DEXTERS,

LIMITED,

362, City Road, LONDON, E.C. 1.

IMPORTERS OF

MYRABOLAMS

HEMP

SEEDS

PEPPERS

CLOVES

OILS

Indian Representative :—

Mr. F. E. HARDCASTLE,

Alice Buildings,

Hornby Road,

BOMBAY.

The General Electric Co., Ltd.

Known throughout the World as the

G. E. C.

**Manufacturers and Suppliers of
Everything Electrical**

including :—



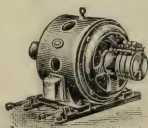
**G. E. C. OSRAM
Lamp.**



G. E. C. Wires.



G. E. C. Cells.



G. E. C. Motors.

Complete Central Station Equipments, Electrical Plant of every description, Steam Turbines, Turbo Blowers, Coal and Ore Conveying Plant, Mining Machinery, Gas Cleaning Plant, Motors, Dynamos, Switchboards, Switchgear, "Witton-Kramer" Portable Electric Tools, Drills, Lifting Magnets, Engineering Supplies, Electric Fans, Electric Lighting Supplies, Fixtures and Glassware, Osram Lamps, Robertson Lamps, Arc Lamps and Accessories, Carbons, Cables, Conduit Wiring, Outfits, Measuring Instruments, Porcelain Ware, Telephone and Telegraphic Apparatus, Bells, and Signalling Apparatus, Batteries, Heating and Cooking Apparatus, Electro-Medical Apparatus, Transformers, Advertising Signs, Illuminating Devices, Insulators, Magnetos, Wireless Apparatus, &c., &c.

**The General Electric
Co., Ltd.**

Head Office :

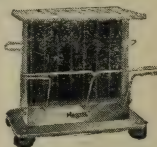
**67, Queen Victoria St., London,
E. C. 4.**

INDIAN BRANCHES

**The General Electric Co., Ltd. (India),
14, Old Court House Street, Calcutta, and
108, Armenian Street, Madras.**



G. E. C. Titting.



**G. E. C. Electric
Toaster.**



**G. E. C. "Freezor"
Electric Fan.**



**G. E. C. "Mag-
net" Electric
Iron.**

Index to "Imperial Trade Guide" and Advertised Businesses.

	PAGE		PAGE
Acids.		Bradford Woollen Goods & Laces.	
Brotherton & Co., Ltd.	xlv	Fletcher Hardware Co., Ltd.	lx
Acid Manufacturers.		Brandy.	
F. W. Berk & Co., Ltd.	lxix	Fromy, Rogee & Co.	xiv
Accumulator Acid Manufacturers.		Brassfoundry.	
F. W. Berk & Co., Ltd.	lxix	Fletcher Hardware Co., Ltd.	lx
Air Compressors.		Guest and Chrimes, Ltd.	lxxix
Robey & Co., Ltd.	liv	Brass & Nickel Founders.	
Air Coolers, Filters, Conditioning Plant.		David Bird & Co.	lxiv
Heenan & Froude, Ltd.	xlii	Brazing Outfits (portable) Lamps, etc.	
Aluminium Notchbar & Ingots.		The Kitson Empire Lighting Co., Ltd.	lxxvi
The Aluminium Corporation, Ltd.	xliii	Brewers and Distillers Engineers.	
Aluminium Powder & Granulated.		John Dore & Co.	lxviii
The Aluminium Corporation, Ltd.	xliii	Buckle Manufacturers.	
Aluminium Rolling Slabs & Sheets.		David Bird & Co.	lxiv
The Aluminium Corporation, Ltd.	xliii	Bucket Making Machinery & Galvanizing Plants.	
Aluminium and Tin Workers.		Daniel Smith, Ltd.	lxxiii
John Dore & Co.	lxviii	Buggy Lamp Manufacturers.	
Ammonia & Ammonium Compounds.		James Neale & Sons, Ltd.	lxvi
Brotherton & Co., Ltd.	xlv	Canvas.	
Art Metal Workers.		Andrew Mitchell & Co., Ltd.	
Joseph Sankey & Sons, Ltd.	xl	Low & Bonar, Ltd.	
Banking and Exchange.		Muir Mills Co., Ltd.	xv
Bank of Bombay	viii	Carpets.	
Bank of Taiwan, Ltd.	vii	Muir Mills Co., Ltd.	xvi
Chartered Bank of India, Australia and China	ix	Carriage & Wagon Fittings.	
Grindlay & Co.	lxxxvi	W. Crowder & Co., Ltd.	xxvi
Hongkong and Shanghai Banking Corporation	xii	Carriage Lamp Manufacturers.	
International Banking Corporation	v	James Neale & Sons, Ltd.	lxvi
Mercantile Bank of India, Ltd.	xiii	Caustic Soda.	
National Bank of India, Ltd.	xi	Dexters, Ltd.	xxxii
The Sumitomo Bank, Ltd.	x	Chemicals Manufacturers & Merchants.	
The Yokohama Specie Bank, Ltd.	vi	Alex. Cross & Sons, Ltd.	lxxi
Clothing.		Brotherton & Co., Ltd.	xlvi
W. Crowder & Co., Ltd.	xxvii	Dexters, Ltd.	xxxii
Columinous Solution.		F. W. Berk & Co., Ltd.	lxix
W. H. Keys, Ltd.	lxxii	James C. Barr, Ltd.	xlv
Low Lamps.		K. H. Kabbur & Co.	xiv
The Kitson Empire Lighting Co., Ltd.	lxxvi	Wengers, Ltd.	xiv
Book Binding Materials.		Chemicals & Produce.	
Rexine, Ltd.	lxxx	Brown & Forth.	lxvi
Boots and Shoes.		Chemical Manufacturers	
H. C. Smith, Ltd.	lxxxiii	F. W. Berk & Co., Ltd.	lxix
		Chemical Plant Makers.	
		John Dore & Co.	lxvii

	PAGE		PAGE
Cigarettes.		Electric Lamp Manufacturers.	
Robert Sinclair, Ltd.	lxxviii	The General Electric Co., Ltd.	xxxiii
Coal Tar Products.		Electrical Engineers.	
Brotherton & Co., Ltd.	xlvi	Greaves Cotton & Co.	xix
Colour Manufacturers.		The Oriental Engineering and Trading Co.	xxiii
K. H. Kabbur & Co.	xiv	Electric Welding.	
Wengers, Ltd.	lx	Alcock, Ashdown & Co., Ltd.	lxxxiv
Constructional Engineers.		Electrical Plant.	
Alcock, Ashdown & Co., Ltd.	lxxxiv	The General Electric Co., Ltd.	xxxiii
H. I. Dixon & Co., Ltd.	xxvi	Electrically Operated Freight Trucks.	
Coppersmiths and Brass Finishers.		Heenan & Froude.	xliv
John Dore & Co.	lxviii	Emery Belt Grinders.	
Corrugated Sheets.		The Anglo Russian Eng. Co., Ltd.	lxii
John Summers & Sons, Ltd.	lvi	Enamels for Metals.	
Corset Makers Sundries, Buses, Sides, Shields and Whalebone.		Wengers, Ltd.	xiv
Frederick Newton & Co.	lxx	Engineers.	
Cotton Canvas.		Alcock, Ashdown & Co., Ltd.	lxxxiv
Andrew Mitchell & Co., Ltd.	lii	Greaves Cotton & Co.	xix
Cotton Piece & Fancy Goods.		H. I. Dixon & Co., Ltd.	xxvi
Fletcher Hardware Co., Ltd.	lx	Richardson & Cruddas	xxi
Muir Mills Co., Ltd.	xvi	Essential Oils.	
Cut Nails.		Alfred Joensson.	lviii
John Summers & Sons, Ltd.	lvi	Export & Import Merchants.	
Cutlery—Every description for Indian Market.		Frame & Co.	iv
Lockwood Brothers, Ltd.	xlx	Export Buying Agents.	
Damp Proofing (Courses, Walls, etc.)		Arthur Chitty & Co.	xlvi
Cuirass Products, Ltd.	lxxviii	Fancy Leather Goods.	
Disinfectants & Disinfecting Apparatus.		Rexine, Ltd.	lxxx
Summerscales, Ltd.	lv	Fertilisers—Chemical.	
F. W. Berk & Co., Ltd.	lxix	Alex. Cross & Sons, Ltd.	lxxi
Drug Merchants.		Files.	
F. W. Berk & Co., Ltd.	lxix	Lockwood Brothers, Ltd.	xlx
Dry Cleaning Soap Manufacturers.		Fire Extinguishing Apparatus.	
Montgomerie, Stobo & Co., Ltd.	lxxiv	Guest & Chrimes, Ltd.	lxxix
Dye Merchants.		Galvanised Sheets (Corrugated & Plain).	
James C. Barr, Ltd.	xl	John Summers & Sons, Ltd.	lv
Dye Stuffs.		United States Steel Products Co.	xxx
Brown & Forth.	lxvii	Galvanizers.	
K. H. Kabbur & Co.	xiv	S. Ramsey & Co.	lxxi
Dynamometers for Engine Testing.		Gas Mantle Machines.	
Heenan & Froude, Ltd.	xliv	The Harrison Patent Knitting Machine Co., Ltd.	lxxxii
Edge Tools.		General Merchants.	
Lockwood Brothers, Ltd.	xlx	Lockwood Brothers, Ltd.	xlx
Electric Lamps.		General Plumber Goods.	
The General Electric Co., Ltd.	xxxiii	Guest & Chrimes, Ltd.	lxxix
The Edison Swan Electric Co., Ltd.	lxxxvii	Glass Colours.	
Electric Lighting Sets.		Wengers, Ltd.	lx
The Austin Motor Co., Ltd.	lxxxii	Hardware & Enamelled Ware.	
		Fletcher Hardware Co., Ltd.	lx
		W. Crowder & Co., Ltd.	xxvi

PAGE

PAGE

Hames Manufacturers.

David Bird & Co. lxiv

Harness Furniture Manufacturers.

David Bird & Co. lxiv

Hoops (Steel).

John Summers & Sons, Ltd. lvi

Hotels.

The Taj Mahal xvii

Hose Supporters for Men, Women, and Children.

Frederick Newton & Co. lxx

Hosiery Yarn Spinners.

J. & W. Bastard xlv

Hosiery & Knitting Machines.

The Harrison Patent Knitting Machine Co., Ltd. lxxxii

Hydraulic Engineers.

Gilbert Gilkes & Co. lxv

Importers of Steel and Wire.

United States Steel Products Co. xxxi

Importers & Exporters of General Produce.

Alfred Joensson lviii

Arthur Chitty & Co. xlviii

Incandescent Oil Lamps.

The Kitson Empire Lighting Co., Ltd. lxxvi

Insurance Companies and Agents.

General Accident, Fire and Life Assurance Corporation, Ltd. lxxxv

Grindlay & Co. lxxxvi

The Eagle, Star and British Dominions Insurance Co., Ltd. xxviii

Iron and Brass Founders.

Alcock, Ashdown & Co., Ltd. lxxxiv

Guest Chrimmes, Ltd. lxxxix

H. I. Dixon & Co., Ltd. xxvi

Richardson & Cruddas xxi

Ironmongery (Builders' & Domestic).

Fletcher Hardware Co., Ltd. lx

Knitting Machines.

The Harrison Patent Knitting Machine Co., Ltd. lxxxii

Ladder Platforms.

The Anglo Russian Eng. Co., Ltd. lxii

Lamps (Incandescent, Oil).

The Kitson Empire Lighting Co., Ltd. lxxvi

Laundry Machinery.

Summerscales, Ltd. lv

Leather Cloth (Imitation Leather).

Rexine, Ltd. lxxx

Leather Goods.

H. C. Smith, Ltd. lxxxiii

Leggings & Gaiters.

H. C. Smith, Ltd. lxxxiii

Lock, Latch and Bolt Making Plants.

Daniel Smith, Ltd. lxxiii

Marking Ink.

Charles Bowman, Ltd. lxxviii

Marine Oil Engines.

Thornycroft (India), Ltd. xxix

Measuring Tape Manufacturers.

Frederick Newton & Co. lxx

Merchants—Export & Import.

Frame & Co. iv

H. M. Mehta & Co. xviii

Metal Perforators.

G. A. Harvey & Co. (London) Ltd. lix

Metal Stampers.

Joseph Sankey & Sons, Ltd. xl

Meters ("Turbine" Water, Gas, wet & dry).

Guest & Chrimmes, Ltd. lxxxix

Motor Cars.

Austin Motor Car Co., Ltd. lxxxix

Ford Automobiles xxv

Motor Vehicles.

Ford Automobiles xxv

Thornycroft (India), Ltd. xxix

Motor Tyres.

George Spencer Moulton & Co. liii

Oil Coolers.

Heenan & Froude, Ltd. xlii

Oil & Grease Manufacturers.

Montgomerie, Stobo & Co., Ltd. lxxiv

Oils.

Dexters, Ltd. xxxii

Paint (Anti-fouling, anti-corrosive, Acid-resisting, Insulating.)

Alcock, Ashdown & Co., Ltd. lxxxiv

Cuirass Products, Ltd. lxxxviii

Paint Manufacturers.

Montgomerie, Stobo & Co., Ltd. lxxiv

Wilkinson, Heywood & Clark, Ltd. xv

Paint and Varnishes.

W. Crowder & Co., Ltd. xxvii

W. H. Keys, Ltd. lxxii

Wilkinson, Heywood & Clark, Ltd. xv

Paper Makers, Merchants & Agents.

Andrew White & Sons, Ltd. xli

W. V. Bowater & Sons, Ltd. xlvii

Pencils (Lead).

The American Pencil Co. ("Venus") iii

	PAGE		PAGE
Photographic Plates, Papers and Chemicals.		Sheet Metal	
Wellington & Ward	ii	Trunks.	
Pharmaceuticals.		Daniel Smith, Ltd.	lxxiii
Brown & Forth.	lxvii	Shipbuilders & Boilermakers.	
Potters Colours Manufacturers.		Alcock, Ashdown & Co., Ltd.	lxxxiv
Wengers, Ltd.	lx	H. I. Dixon & Co., Ltd.	xxvi
Presses, Stamps, Shears and Metal Working Machinery.		Shipping Agents.	
Daniel Smith, Ltd.	lxxiii	Griidlay & Co.	lxxxvi
Printing Blocks.		Shipping Companies.	
Garratt & Atkinson	lxi	Anchor Line	i
Provision Merchants.		Shoe Mercery.	
Liptons, Ltd.	xxiv	H. C. Smith, Ltd.	lxxxiii
Pumps, Centrifugal.		Spinners—Worsted.	
Gilbert Gilkes & Co.	lxv	J. & W. Bastard	xliv
Refuse Destructors.		Sprayers.	
Heenan & Froude, Ltd.	xlii	Summerscales, Ltd.	lv
Reinforced Concrete.		Stationery Manufacturers.	
Marsland, Price & Co., Ltd.	xxii	Andrew Whyte & Son, Ltd.	xli
Rickshaw Lamp Manufacturers.		Steam Engines—all types.	
James Neale & Sons, Ltd.	lxv	Robey & Co., Ltd.	liv
Rolling Mills, Aircraft Rolling and Swaging Machinery.		Steel Beams.	
Daniel Smith, Ltd.	lxxiii	Geo. Service & Co.	xxiii
Roof Waterproofing Compositions.		Steel Products.	
Cuirass Products, Ltd.	lxxviii	United States Steel Products Company	xxxi
Rubber Goods (Surgical and Mechanical.)		Steel Sheets (Black).	
James Lyne Hancock, Ltd.	lxiv	John Summers & Sons, Ltd.	lvi
Rubber Machinery.		Stencil Appliances.	
Summerscales, Ltd.	lv	Charles Bowman, Ltd.	lxviii
Saddlery.		Stencil Ink.	
Rawle & Sons	lvii	Charles Bowman, Ltd.	lxviii
S andpapering Machines.		Stoneware Drain Pipes.	
The Anglo Russian Eng. Co., Ltd. ..	lxii	J. Knowles & Co. (London), Ltd. ..	l
Sanitary Fittings—Pipes, &c.		Surgical Rubber Goods.	
J. Knowles & Co. (London), Ltd. ..	l	James Lyne Hancock, Ltd.	lxiv
Marsland, Price & Co., Ltd.	xxii	Synthetic Dyes & Dyers' Chemicals.	
Richardson & Cruddas	xxi	Brotherton & Co., Ltd.	xlvi
Saws.		Tacks.	
Lockwood Brothers, Ltd.	xlix	John Summers & Sons, Ltd.	lvi
Seed & Grain Merchants.		Tarpaulins.	
Alex. Cross & Sons, Ltd.	lxxi	Andrew Mitchell & Co., Ltd.	lii
Seed Growers, Exporters & Wholesale Merchants.		Low & Bonar, Ltd.	li
Kelway & Son	lviii	Telegraphic Codes.	
Semi-Diesel Crude Oil Engines.		Rupert S. Kay	lxxxiii
Robey & Co., Ltd.	liv	Tools.	
Sheet Metal Hollowware.		Fletcher Hardware Co., Ltd.	lx
Daniel Smith, Ltd.	lxxiii	Traction Engines, Steam Tractors & Wagons.	
		Robey & Co., Ltd.	liv
		Tractors.	
		Austin Motor Car Co., Ltd.	lxxxi
		Travelling Requisites.	
		Underwood Manufacturing Co., Ltd. ..	lvii

	PAGE		PAGE
Trunks & Bags.		Wholesale Stationers.	
Underwood Manufacturing Co., Ltd.	lvii	W. V. Bowater & Sons, Ltd.	xlvi
Tubes (Iron, Steel, Black and Galvanized).		Wire Weavers.	
Scottish Tube Co., Ltd.	lxiii	G. A. Harvey & Co. (London), Ltd. ..	lix
Tyres (Motor Cycle, &c.)		Wire Weavers, Workers, Netting Makers.	
George Spencer Moulton & Co. ..	liii	S. Ramsey & Co.	lxxi
Upholstering.		Wire Rope Manufacturers.	
Rexine, Ltd.	lxxx	Glaholm & Robson, Ltd.	lix
Valves, Sluice, for water, steam, sewage and gas.		Wires & Cables.	
Guest & Chrimes, Ltd.	lxxix	The General Electric Co., Ltd. ..	xxxiii
Varnish Paints.		Wood Preservative.	
W. H. Keys, Ltd.	lxxii	Cuirass Products, Ltd.	lxxviii
Wilkinson, Heywood & Clark, Ltd.	xv	W. H. Keys, Ltd.	lxxii
Water Coolers.		Worsted Spinners.	
Heenan & Froude, Ltd.	xlui	J. & W. Bastard	xliv
Water Turbines.		Wrought Iron Hollow-ware Manufacturers.	
Gilbert Gilkes & Co.	lxv	Joseph Sankey & Sons, Ltd. ("Neptune" Brand, Enamelled and Tinned) ..	xl
Waterproof Canvas.		Zinc Merchants & Manufacturers.	
Andrew Mitchell & Co., Ltd. .. .	li	G. A. Harvey & Co. (London), Ltd. ..	lix
Low & Bonar, Ltd.	li		
Waterproof Engineering Sheetting.			
W. H. Keys, Ltd.	lxxii		
Wholesale Druggists.			
Alfred Joensson	lviii		



The Times of India

“One of the most powerful and influential papers in India, and as such one of the most valuable means—open to the advertiser of making himself and his wares known. It circulates over the whole of the country.”

—The Advertising World.



THE
INDIAN YEAR BOOK
1920.

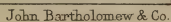
A STATISTICAL AND HISTORICAL ANNUAL OF
THE INDIAN EMPIRE, WITH AN
EXPLANATION OF THE
PRINCIPAL TOPICS
OF THE DAY

EDITED BY
SIR STANLEY REED, LL.D.

SEVENTH YEAR OF ISSUE

PUBLISHED BY
BENNETT, COLEMAN & CO., LTD.,
THE "TIMES OF INDIA" OFFICES, BOMBAY AND CALCUTTA.
LONDON OFFICE: 187, FLEET STREET, E. C.

THE LIBRARY
OF THE
UNIVERSITY OF OLLIMOTIS





AFGHANISTAN

KASHMIR

CHANG TANG
TIBET

KHAM

BALUCHISTAN

RAJPUTANA

UNION

BHUTAN

ASSAM

INDIA

BIHAR

BEHAL

CENTRAL PROVINCES

ORISSA

UPPER BURMA

LOWER BURMA

ARABIAN
SEA

BAY OF
BENGAL

HYDERABAD

BASTAR

MADRAS

MYSORE

MADRAS

Andaman
Islands

Mergui
Archipelago

Nicobar
Islands

CEYLON

THE INDIAN EMPIRE

Scale 1:100,000,000
British India
Native States and Territories
Railways
The figures indicate height in feet

REID
DINK
YELLOW
GREEN
Maldiv
Islands

CALENDAR FOR 1920.

January.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	...	1	8	15	22	29
F.	...	2	9	16	23	30
S.	...	3	10	17	24	31

February.

S.	...	1	8	15	22	29	...
M.	...	2	9	16	23	...	...
Tu.	...	3	10	17	24	...	...
W.	...	4	11	18	25	...	...
Th.	...	5	12	19	26	...	...
F.	...	6	13	20	27	...	...
S.	...	7	14	21	28	...	...

March.

S.	...	7	14	21	28	...
M.	...	1	8	15	22	29
Tu.	...	2	9	16	23	30
W.	...	3	10	17	24	31
Th.	...	4	11	18	25	...
F.	...	5	12	19	26	...
S.	...	6	13	20	27	...

April.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	...	1	8	15	22	29
F.	...	2	9	16	23	30
S.	...	3	10	17	24	...

May.

S.	...	2	9	16	23	30
M.	...	3	10	17	24	31
Tu.	...	4	11	18	25	...
W.	...	5	12	19	26	...
Th.	...	6	13	20	27	...
F.	...	7	14	21	28	...
S.	...	1	8	15	22	29

June.

S.	...	6	13	20	27	...
M.	...	7	14	21	28	...
Tu.	...	1	8	15	22	29
W.	...	2	9	16	23	30
Th.	...	3	10	17	24	...
F.	...	4	11	18	25	...
S.	...	5	12	19	26	...

July.

S.	...	4	11	18	25	...
M.	...	5	12	19	26	...
Tu.	...	6	13	20	27	...
W.	...	7	14	21	28	...
Th.	...	1	8	15	22	29
F.	...	2	9	16	23	30
S.	...	3	10	17	24	31

August.

S.	...	1	8	15	22	29	...
M.	...	2	9	16	23	30	...
Tu.	...	3	10	17	24	31	...
W.	...	4	11	18	25	...	...
Th.	...	5	12	19	26	...	...
F.	...	6	13	20	27	...	...
S.	...	7	14	21	28	...	...

September.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	...	1	8	15	22	29
Th.	...	2	9	16	23	30
F.	...	3	10	17	24	...
S.	...	4	11	18	25	...

October.

S.	...	3	10	17	24	31
M.	...	4	11	18	25	...
Tu.	...	5	12	19	26	...
W.	...	6	13	20	27	...
Th.	...	7	14	21	28	...
F.	...	1	8	15	22	29
S.	...	2	9	16	23	30

November.

S.	...	7	14	21	28	...
M.	...	1	8	15	22	29
Tu.	...	2	9	16	23	30
W.	...	3	10	17	24	...
Th.	...	4	11	18	25	...
F.	...	5	12	19	26	...
S.	...	6	13	20	27	...

December.

S.	...	5	12	19	26	...
M.	...	6	13	20	27	...
Tu.	...	7	14	21	28	...
W.	...	1	8	15	22	29
Th.	...	2	9	16	23	30
F.	...	3	10	17	24	31
S.	...	4	11	18	25	...

Phases of the Moon—JANUARY 31 Days.

○ Full Moon. 6th, 2h. 34·9m. A.M. ● New Moon 21st, 10h. 56·9m. A.M.
 ☾ Last Quarter 13th, 5h. 38·6m. A.M. ☽ First Quarter 28th, 9h. 8·0m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.			Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.	Sunset. P.M.	True Noon.		
			H. M.	H. M.	H. M. P.M.	D.	° S.
Thursday	..	1	7 12	6 12	0 42	9·85	23 6
Friday	..	2	7 12	6 13	0 42	10·85	23 1
Saturday	..	3	7 13	6 13	0 43	11·85	22 56
Sunday	..	4	7 13	6 14	0 43	12·85	22 50
Monday	..	5	7 13	6 15	0 44	13·85	22 45
Tuesday	..	6	7 13	6 15	0 44	14·85	22 38
Wednesday	..	7	7 14	6 16	0 45	15·85	22 32
Thursday	..	8	7 14	6 17	0 45	16·85	22 25
Friday	..	9	7 14	6 17	0 46	17·85	22 17
Saturday	..	10	7 14	6 18	0 46	18·85	22 8
Sunday	..	11	7 14	6 18	0 46	19·85	22 0
Monday	..	12	7 15	6 19	0 47	20·85	21 50
Tuesday	..	13	7 15	6 20	0 47	21·85	21 41
Wednesday	..	14	7 15	6 21	0 48	22·85	21 31
Thursday	..	15	7 15	6 22	0 48	23·85	21 20
Friday	..	16	7 15	6 22	0 48	24·85	21 10
Saturday	..	17	7 15	6 23	0 49	25·85	20 58
Sunday	..	18	7 15	6 24	0 49	26·85	20 47
Monday	..	19	7 15	6 24	0 49	27·85	20 36
Tuesday	..	20	7 15	6 25	0 50	28·85	20 23
Wednesday	..	21	7 15	6 25	0 50	0·07	20 10
Thursday	..	22	7 15	6 26	0 50	1·07	19 57
Friday	..	23	7 15	6 27	0 50	2·07	19 44
Saturday	..	24	7 15	6 27	0 51	3·07	19 30
Sunday	..	25	7 15	6 28	0 51	4·07	19 15
Monday	..	26	7 15	6 29	0 51	5·07	19 1
Tuesday	..	27	7 14	6 29	0 51	6·07	18 46
Wednesday	..	28	7 14	6 29	0 52	7·07	18 30
Thursday	..	29	7 14	6 30	0 52	8·07	18 15
Friday	..	30	7 14	6 30	0 52	9·07	17 59
Saturday	..	31	7 14	6 31	0 52	10·07	17 42

Phases of the Moon—FEBRUARY 29 Days.

○ Full Moon 4th, 2h. 12⁴m. P.M.

● New Moon 20th, 3h. 4⁸m. A.M.

☾ Last Quarter .. 12th, 2h. 19²m. A.M.

☽ First Quarter..... 27th, 5h. 19⁵m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	S.
							P.M.			
Sunday	..	1	32	7 13	6 31	0 52			11·07	17 26
Monday	..	2	33	7 13	6 32	0 53			12·07	17 9
Tuesday	..	3	34	7 13	6 32	0 53			13·07	16 52
Wednesday	..	4	35	7 12	6 33	0 53			14·07	16 35
Thursday	..	5	36	7 12	6 34	0 53			15·07	16 17
Friday	..	6	37	7 12	6 34	0 53			16·07	15 59
Saturday	..	7	38	7 11	6 35	0 53			17·07	15 41
Sunday	..	8	39	7 11	6 35	0 53			18·07	15 22
Monday	..	9	40	7 10	6 36	0 53			19·07	15 3
Tuesday	..	10	41	7 10	6 36	0 53			20·07	14 44
Wednesday	..	11	42	7 10	6 37	0 53			21·07	14 25
Thursday	..	12	43	7 9	6 37	0 53			22·07	14 5
Friday	..	13	44	7 9	6 38	0 53			23·07	13 45
Saturday	..	14	45	7 8	6 38	0 53			24·07	13 25
Sunday	..	15	46	7 7	6 39	0 53			25·07	13 5
Monday	..	16	47	7 7	6 39	0 53			26·07	12 45
Tuesday	..	17	48	7 6	6 40	0 53			27·07	12 24
Wednesday	..	18	49	7 5	6 40	0 53			28·07	12 3
Thursday	..	19	50	7 5	6 40	0 53			29·07	11 42
Friday	..	20	51	7 4	6 41	0 53			0·40	11 21
Saturday	..	21	52	7 4	6 41	0 53			1·40	10 59
Sunday	..	22	53	7 3	6 41	0 53			2·40	10 37
Monday	..	23	54	7 2	6 42	0 52			3·40	10 16
Tuesday	..	24	55	7 2	6 42	0 52			4·40	9 55
Wednesday	..	25	56	7 1	6 42	0 52			5·40	9 33
Thursday	..	26	57	7 1	6 43	0 51			6·40	9 10
Friday	..	27	58	7 0	6 43	0 51			7·40	8 48
Saturday	..	28	59	7 0	6 43	0 51			8·40	8 26
Sunday	..	29	60	7 0	6 44	0 51			9·40	8 3

Phases of the Moon—MARCH 31 Days.

○ Full Moon 5th, 2h. 42·6m. A.M.

● New Moon 20th, 4h. 25·8m. P.M.

☾ Last Quarter 12th, 11h. 27·4m. P.M.

☽ First Quarter 27th, 0h. 15·1m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	S.
				P.M.						
Monday	..	1	6	59	6	44	0	51	10·40	7 40
Tuesday	..	2	6	58	6	45	0	51	11·40	7 17
Wednesday	..	3	6	57	6	45	0	51	12·40	6 54
Thursday	..	4	6	56	6	45	0	51	13·40	6 31
Friday	..	5	6	56	6	46	0	51	14·40	6 8
Saturday	..	6	6	55	6	46	0	50	15·40	5 45
Sunday	..	7	6	54	6	47	0	50	16·40	5 22
Monday	..	8	6	53	6	47	0	50	17·40	4 58
Tuesday	..	9	6	53	6	47	0	50	18·40	4 35
Wednesday	..	10	6	52	6	48	0	49	19·40	4 11
Thursday	..	11	6	51	6	48	0	49	20·40	3 48
Friday	..	12	6	50	6	48	0	49	21·40	3 24
Saturday	..	13	6	49	6	48	0	49	22·40	3 1
Sunday	..	14	6	49	6	49	0	48	23·40	2 37
Monday	..	15	6	48	6	49	0	48	24·40	2 13
Tuesday	..	16	6	47	6	49	0	48	25·40	1 50
Wednesday	..	17	6	46	6	49	0	48	26·40	1 26
Thursday	..	18	6	45	6	49	0	48	27·40	1 2
Friday	..	19	6	44	6	50	0	47	28·40	0 39
Saturday	..	20	6	43	6	50	0	47	29·40	0 15
Sunday	..	21	6	42	6	50	0	47	0·84	0 9 N.
Monday	..	22	6	41	6	50	0	46	1·84	0 33
Tuesday	..	23	6	40	6	51	0	46	2·84	0 66
Wednesday	..	24	6	39	6	51	0	46	3·84	1 20
Thursday	..	25	6	39	6	51	0	45	4·84	1 43
Friday	..	26	6	39	6	51	0	45	5·84	2 7
Saturday	..	27	6	38	6	51	0	45	6·84	2 30
Sunday	..	28	6	37	6	52	0	45	7·84	2 54
Monday	..	29	6	36	6	52	0	44	8·84	3 17
Tuesday	..	30	6	35	6	52	0	44	9·84	3 41
Wednesday	..	31	6	34	6	52	0	44	10·84	4 4

Phases of the Moon—APRIL 30 Days.

○ Full Moon..... 3rd, 4h. 24·7m. P.M.

● New Moon 19th, 3h. 13·1m. A.M.

☾ Last Quarter 11th, 6h. 54·2m. P.M.

☽ First Quarter 25th, 6h. 57·5m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M. P.M.	D.	N.
Thursday	..	1	92	6 33	6 53	0 43	11·84	4 27		
Friday	..	2	93	6 33	6 53	0 43	12·84	4 50		
Saturday	..	3	94	6 32	6 53	0 42	13·84	5 13		
Sunday	..	4	95	6 31	6 53	0 42	14·84	5 36		
Monday	..	5	96	6 30	6 54	0 42	15·84	5 59		
Tuesday	..	6	97	6 29	6 54	0 42	16·84	6 22		
Wednesday	..	7	98	6 28	6 54	0 41	17·84	6 44		
Thursday	..	8	99	6 28	6 54	0 41	18·84	7 7		
Friday	..	9	100	6 27	6 54	0 41	19·84	7 29		
Saturday	..	10	101	6 26	6 55	0 40	20·84	7 52		
Sunday	..	11	102	6 25	6 55	0 40	21·84	8 14		
Monday	..	12	103	6 24	6 55	0 40	22·84	8 36		
Tuesday	..	13	104	6 24	6 56	0 40	23·84	8 58		
Wednesday	..	14	105	6 23	6 56	0 39	24·84	9 20		
Thursday	..	15	106	6 22	6 56	0 39	25·84	9 41		
Friday	..	16	107	6 21	6 56	0 39	26·84	10 3		
Saturday	..	17	108	6 21	6 57	0 38	27·84	10 24		
Sunday	..	18	109	6 20	6 57	0 38	28·84	10 45		
Monday	..	19	110	6 19	6 57	0 38	0·40	11 6		
Tuesday	..	20	111	6 19	6 57	0 38	1·40	11 27		
Wednesday	..	21	112	6 18	6 57	0 38	2·40	11 47		
Thursday	..	22	113	6 17	6 58	0 37	3·40	12 7		
Friday	..	23	114	6 16	6 58	0 37	4·40	12 27		
Saturday	..	24	115	6 15	6 58	0 37	5·40	12 47		
Sunday	..	25	116	6 14	6 59	0 37	6 40	13 7		
Monday	..	26	117	6 14	6 59	0 37	7·40	13 26		
Tuesday	..	27	118	6 13	6 59	0 36	8·40	13 46		
Wednesday	..	28	119	6 13	7 0	0 36	9·40	14 5		
Thursday	..	29	120	6 13	7 0	0 36	10·40	14 23		
Friday	..	30	121	6 12	7 0	0 36	11·40	14 42		

Phases of the Moon—MAY 31 Days.

○ Full Moon 3rd, 7h. 17·3m. A.M.

● New Moon18th, 11h. 55·2m. A.M.

☾ Last Quarter.... 11th, 11h. 21·0m. A.M.

☽ First Quarter25th, 2h. 37·2m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	N.
Saturday	..	1	6	11	7	1	0	36	12·40	15 0
Sunday	..	2	6	11	7	1	0	36	13·40	15 18
Monday	..	3	6	10	7	1	0	36	14·40	15 36
Tuesday	..	4	6	10	7	2	0	35	15·40	15 53
Wednesday	..	5	6	9	7	2	0	35	16·40	16 11
Thursday	..	6	6	9	7	2	0	35	17·40	16 29
Friday	..	7	6	8	7	3	0	35	18·40	16 45
Saturday	..	8	6	8	7	3	0	35	19·40	17 2
Sunday	..	9	6	7	7	3	0	35	20·40	17 18
Monday	..	10	6	7	7	4	0	35	21·40	17 34
Tuesday	..	11	6	6	7	4	0	35	22·40	17 49
Wednesday	..	12	6	6	7	4	0	35	23·40	18 5
Thursday	..	13	6	5	7	5	0	35	24·40	18 20
Friday	..	14	6	5	7	5	0	35	25·40	18 34
Saturday	..	15	6	5	7	6	0	35	26·40	18 49
Sunday	..	16	6	4	7	6	0	35	27·40	19 3
Monday	..	17	6	4	7	6	0	35	28·40	19 16
Tuesday	..	18	6	4	7	7	0	35	0·03	19 30
Wednesday	..	19	6	3	7	7	0	35	1·03	19 43
Thursday	..	20	6	3	7	7	0	35	2·03	19 55
Friday	..	21	6	3	7	8	0	35	3·03	20 8
Saturday	..	22	6	2	7	8	0	35	4·03	20 20
Sunday	..	23	6	2	7	9	0	35	5·03	20 32
Monday	..	24	6	2	7	9	0	35	6·08	20 44
Tuesday	..	25	6	2	7	9	0	35	7·03	20 55
Wednesday	..	26	6	2	7	10	0	36	8·03	21 5
Thursday	..	27	6	2	7	10	0	36	9·03	21 16
Friday	..	28	6	1	7	11	0	36	10·03	21 25
Saturday	..	29	6	1	7	11	0	36	11·03	21 35
Sunday	..	30	6	1	7	11	0	36	12·03	21 44
Monday	..	31	6	1	7	12	0	36	13·03	21 53

Phases of the Moon—JUNE 30 Days.

○ Full Moon 1st, 10h. 48·2m. P.M.

● New Moon 16th, 7h. 11·3m. P.M.

☾ Last Quarter 10th, 0h. 28·5m. A.M.

☽ First Quarter 23rd, 0h. 19·5m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.	
			Sunrise. A.M.		Sunset. P.M.		True Noon.				
			H.	M.	H.	M.	H.	M.	D.	N.	
							P.M.				
Tuesday	..	1	153	3	1	7	12	0	36	14·03	22 1
Wednesday	..	2	154	6	1	7	12	0	36	15·03	22 9
Thursday	..	3	155	6		7	13	0	37	16·03	22 17
Friday	..	4	156	6	1	7	13	0	37	17·03	22 24
Saturday	..	5	157	6	1	7	14	0	37	18·03	22 32
Sunday	..	6	158	6	1	7	14	0	37	19·03	22 38
Monday	..	7	159	6	1	7	14	0	37	20·03	22 44
Tuesday	..	8	160	6	1	7	15	0	37	21·03	22 50
Wednesday	..	9	161	6	1	7	15	0	38	22·03	22 55
Thursday	..	10	162	6	1	7	15	0	38	23·03	23 0
Friday	..	11	163	6	1	7	16	0	38	24·03	23 4
Saturday	..	12	164	6	1	7	16	0	38	25·03	23 8
Sunday	..	13	165	6	1	7	16	0	38	26·03	23 12
Monday	..	14	166	6	1	7	17	0	39	27·03	23 15
Tuesday	..	15	167	6	1	7	17	0	39	28·03	23 18
Wednesday	..	16	168	6	1	7	17	0	39	29·03	23 20
Thursday	..	17	169	6	1	7	17	0	39	0·73	23 22
Friday	..	18	170	6	2	7	18	0	39	1·73	23 25
Saturday	..	19	171	6	2	7	18	0	40	2·73	23 26
Sunday	..	20	172	6	2	7	18		40	3·73	23 27
Monday	..	21	173	6	2	7	18	0	40	4·73	23 27
Tuesday	..	22	174	6	3	7	19	0	40	5·73	23 27
Wednesday	..	23	175	6	3	7	19	0	40	6·73	23 26
Thursday	..	24	176	6	3	7	19	0	41	7·73	23 25
Friday	..	25	177	6	3	7	19	0	41	8·73	23 24
Saturday	..	26	178	6	3	7	19	0	41	9·73	23 22
Sunday	..	27	179	6	4	7	19	0	41	10·73	23 20
Monday	..	28	180	6	4	7	20	0	42	11·73	23 17
Tuesday	..	29	181	6	4	7	20	0	42	12·73	23 15
Wednesday	..	30	182	6	5	7	20	0	42	13·73	23 12

Phases of the Moon—JULY 31 Days.

○ Full Moon1st, 2h. 10·7m. P.M.

● New Moon16th, 1h. 55·0m. A.M.

☾ Last Quarter 9th, 10h. 35·6m. A.M.

☾ First Quarter.....23rd, 4h. 50·4m. A.M.

○ Full Moon31st, 4h. 49·3m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	N.
Thursday	..	1	6	5	7	20	0	42	14.73	23 8
Friday	..	2	6	5	7	20	0	42	15.73	23 4
Saturday	..	3	6	6	7	20	0	43	16.73	22 59
Sunday	..	4	6	6	7	20	0	43	17.73	22 54
Monday	..	5	6	6	7	20	0	43	18.73	22 49
Tuesday	..	6	6	7	7	20	0	43	19.73	22 43
Wednesday	..	7	6	7	7	20	0	43	20.73	22 37
Thursday	..	8	6	7	7	20	0	43	21.73	22 30
Friday	..	9	6	8	7	20	0	44	22.73	22 23
Saturday	..	10	6	8	7	20	0	44	23.73	22 16
Sunday	..	11	6	8	7	20	0	44	24.73	22 9
Monday	..	12	6	8	7	20	0	44	25.73	22 1
Tuesday	..	13	6	8	7	20	0	44	26.73	21 53
Wednesday	..	14	6	9	7	20	0	44	27.73	21 44
Thursday	..	15	6	9	7	19	0	44	28.73	21 35
Friday	..	16	6	9	7	19	0	44	0.45	21 25
Saturday	..	17	6	10	7	19	0	45	1.45	21 15
Sunday	..	18	6	10	7	19	0	45	2.45	21 5
Monday	..	19	6	10	7	19	0	45	3.45	20 54
Tuesday	..	20	6	11	7	18	0	45	4.45	20 43
Wednesday	..	21	6	11	7	18	0	45	5.45	20 31
Thursday	..	22	6	12	7	18	0	45	6.45	20 20
Friday	..	23	6	12	7	18	0	45	7.45	20 8
Saturday	..	24	6	12	7	17	0	45	8.45	19 55
Sunday	..	25	6	13	7	17	0	45	9.45	19 44
Monday	..	26	6	13	7	17	0	45	10.45	19 30
Tuesday	..	27	6	13	7	17	0	45	11.45	19 17
Wednesday	..	28	6	14	7	16	0	45	12.45	19 3
Thursday	..	29	6	14	7	16	0	45	13.45	18 49
Friday	..	30	6	14	7	16	0	45	14.45	18 35
Saturday	..	31	6	15	7	15	0	45	15.45	18 20

Phases of the Moon—AUGUST 31 Days.

☾ Last Quarter 7th, 6h. 20·7m. P.M.

☽ First Quarter..... 21st, 4h. 21·8m. P.M.

● New Moon14th, 9h. 13·9m. A.M.

○ Full Moon29th, 6h. 32·8m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	N.
							P.M.			
Sunday	..	1	6	15	7	15	0	45	16·45	18 5
Monday	..	2	6	15	7	14	0	45	17·45	17 50
Tuesday	..	3	6	16	7	14	0	45	18·45	17 35
Wednesday	..	4	6	16	7	13	0	45	19·45	17 19
Thursday	..	5	6	16	7	13	0	45	20·45	17 3
Friday	..	6	6	17	7	12	0	45	21·45	16 46
Saturday	..	7	6	17	7	12	0	44	22·45	16 30
Sunday	..	8	6	17	7	11	0	44	23·45	16 13
Monday	..	9	6	18	7	11	0	44	24·45	15 56
Tuesday	..	10	6	18	7	10	0	44	25·45	15 38
Wednesday	..	11	6	18	7	9	0	44	26·45	15 22
Thursday	..	12	6	19	7	9	0	44	27·45	15 4
Friday	..	13	6	19	7	8	0	44	28·45	14 46
Saturday	..	14	6	19	7	8	0	43	0·14	14 27
Sunday	..	15	6	20	7	7	0	43	1·14	14 9
Monday	..	16	6	20	7	6	0	43	2·14	13 50
Tuesday	..	17	6	20	7	6	0	43	3·14	13 31
Wednesday	..	18	6	20	7	5	0	43	4·14	13 11
Thursday	..	19	6	21	7	4	0	42	5·14	12 52
Friday	..	20	6	21	7	4	0	42	6·14	12 32
Saturday	..	21	6	21	7	3	0	42	7·14	12 12
Sunday	..	22	6	21	7	2	0	42	8·14	11 52
Monday	..	23	6	21	7	1	0	42	9·14	11 32
Tuesday	..	24	6	22	7	1	0	41	10·14	11 12
Wednesday	..	25	6	22	7	0	0	41	11·14	10 51
Thursday	..	26	6	22	6	59	0	41	12·14	10 30
Friday	..	27	6	22	6	59	0	40	13·14	10 9
Saturday	..	28	6	23	6	58	0	40	14·14	9 48
Sunday.	..	29	6	23	6	57	0	40	15·14	9 27
Monday	..	30	6	23	6	56	0	40	16·14	9 5
Tuesday	..	31	6	23	6	55	0	39	17·14	8 44

Phases of the Moon—SEPTEMBER 30 Days.

☾ Last Quarter 6th, 0h. 34·9m. A.M.

☽ First Quarter.....20th, 10h. 25·2m. A.M.

● New Moon12th, 6h. 21·7m. P.M.

○ Full Moon28th, 7h. 26·6m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset P.M.		True Noon.			
			H.	M.	H.	M.	H.	M. P.M.	D.	N.
Wednesday	..	1	245	6 23	6 55	0 39	18°14	8 22		
Thursday	..	2	246	6 24	6 54	0 39	19°14	8 0		
Friday	..	3	247	6 24	6 53	0 38	20°14	7 38		
Saturday	..	4	248	6 24	6 52	0 38	21°14	7 16		
Sunday	..	5	249	6 24	6 51	0 38	22°14	6 54		
Monday	..	6	250	6 24	6 50	0 37	23°14	6 32		
Tuesday	..	7	251	6 25	6 50	0 37	24°14	6 10		
Wednesday	..	8	252	6 25	6 49	0 37	25°14	5 48		
Thursday	..	9	253	6 25	6 48	0 36	26°14	5 25		
Friday	..	10	254	6 25	6 47	0 36	27°14	5 3		
Saturday	..	11	255	6 25	6 46	0 36	28°14	4 40		
Sunday	..	12	256	6 25	6 45	0 35	29°14	4 17		
Monday	..	13	257	6 26	6 44	0 35	0°76	3 54		
Tuesday	..	14	258	6 26	6 43	0 35	1°76	3 31		
Wednesday	..	15	259	6 26	6 43	0 34	2°76	3 8		
Thursday	..	16	260	6 26	6 42	0 34	3°76	2 45		
Friday	..	17	261	6 26	6 41	0 33	4°76	2 21		
Saturday	..	18	262	6 27	6 40	0 33	5°76	1 58		
Sunday	..	19	263	6 27	6 39	0 33	6°76	1 35		
Monday	..	20	264	6 27	6 38	0 32	7°76	1 12		
Tuesday	..	21	265	6 27	6 37	0 32	8°76	0 48		
Wednesday	..	22	266	6 27	6 36	0 32	9°76	0 25		
Thursday	..	23	267	6 27	6 36	0 31	10°76	0 2		
Friday	..	24	268	6 28	6 35	0 31	11°76	0 22		
Saturday	..	25	269	6 28	6 34	0 31	12°76	0 45		
Sunday	..	26	270	6 28	6 33	0 30	13°76	1 9		
Monday	..	27	271	6 28	6 32	0 30	14°76	1 32		
Tuesday	..	28	272	6 28	6 31	0 30	15°76	1 55		
Wednesday	..	29	273	6 29	6 30	0 29	16°76	2 19		
Thursday	..	30	274	6 29	6 29	0 29	17°76	2 42		

Phases of the Moon—OCTOBER 31 Days.

☾ Last Quarter.... 5th, 6h. 23·6m. A.M.

☽ First Quarter....20th, 5h. 59·3m. A.M.

● New Moon.....12th, 6h. 20·4m. A.M.

○ Full Moon.....27th, 7h. 38·9m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	S.
Friday	..	1	6	29	6	29	0	28	18·76	3 5
Saturday	..	2	6	29	6	28	0	28	19 76	3 29
Sunday	..	3	6	29	6	27	0	28	20 76	2 52
Monday	..	4	6	30	6	26	0	28	21·76	4 15
Tuesday	..	5	6	30	6	25	0	27	22·76	4 38
Wednesday	..	6	6	30	6	24	0	27	23·76	5 1
Thursday	..	7	6	30	6	24	0	27	24·76	5 24
Friday	..	8	6	30	6	23	0	27	25·76	5 47
Saturday	..	9	6	31	6	22	0	26	26·76	6 10
Sunday	..	10	6	31	6	21	0	26	27·76	6 33
Monday	..	11	6	31	6	20	0	26	28·76	6 56
Tuesday	..	12	6	31	6	19	0	25	0·26	7 18
Wednesday	..	13	6	31	6	19	0	25	1·26	7 41
Thursday	..	14	6	32	6	18	0	25	2·26	8 3
Friday	..	15	6	32	6	17	0	25	3·26	8 26
Saturday	..	16	6	33	6	16	0	25	4·26	8 49
Sunday	..	17	6	33	6	16	0	24	5·26	9 11
Monday	..	18	6	33	6	15	0	24	6·26	9 33
Tuesday	..	19	6	34	6	14	0	24	7·26	9 54
Wednesday	..	20	6	34	6	14	0	24	8·26	10 16
Thursday	..	21	6	34	6	13	0	24	9·26	10 38
Friday	..	22	6	34	6	12	0	23	10·26	10 59
Saturday	..	23	6	35	6	12	0	23	11·26	11 20
Sunday	..	24	6	35	6	11	0	23	12·26	11 41
Monday	..	25	6	36	6	10	0	23	13·26	12 4
Tuesday	..	26	6	36	6	10	0	23	14·26	12 22
Wednesday	..	27	6	36	6	9	0	23	15·26	12 43
Thursday	..	28	6	37	6	9	0	23	16·26	13 3
Friday	..	29	6	37	6	8	0	23	17·26	13 23
Saturday	..	30	6	37	6	7	0	23	18·26	13 43
Sunday	..	31	6	38	6	7	0	22	19·26	14 2

Phases of the Moon—NOVEMBER 30 Days.

☾ Last Quarter 3rd, 1h. 5'0m. P.M.

☾ First Quarter.....19th, 1h. 42'8m. A.M.

● New Moon10th, 9h. 35'1m. P.M.

○ Full Moon26th, 7h. 12'3m. A.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	S.
								P.M.		
Monday	..	1	306	6 38	6 6	6	0 22		20·26	14 22
Tuesday	..	2	307	6 39	6 6	6	0 22		21·26	14 41
Wednesday	..	3	308	6 39	6 5	6	0 22		22·26	15 0
Thursday	..	4	309	6 40	6 5	6	0 22		23·26	15 18
Friday	..	5	310	6 40	6 4	6	0 22		24·26	15 37
Saturday	..	6	311	6 41	6 4	6	0 22		25·26	15 55
Sunday	..	7	312	6 41	6 4	6	0 22		26·26	16 13
Monday	..	8	313	6 42	6 4	6	0 22		27·26	16 30
Tuesday	..	9	314	6 42	6 3	6	0 23		28·26	16 49
Wednesday	..	10	315	6 43	6 3	6	0 23		29·26	17 5
Thursday	..	11	316	6 43	6 3	6	0 23		0·63	17 22
Friday	..	12	317	6 44	6 2	6	0 23		1·63	17 39
Saturday	..	13	318	6 44	6 2	6	0 23		2·63	17 55
Sunday	..	14	319	6 45	6 1	6	0 23		3·63	18 11
Monday	..	15	320	6 45	6 1	6	0 23		4·63	18 26
Tuesday	..	16	321	6 46	6 1	6	0 23		5·63	18 42
Wednesday	..	17	322	6 46	6 1	6	0 23		6·63	18 56
Thursday	..	18	323	6 47	6 0	6	0 23		7·63	19 11
Friday	..	19	324	6 48	6 0	6	0 24		8·63	19 25
Saturday	..	20	325	6 48	6 0	6	0 24		9·63	19 39
Sunday	..	21	326	6 49	6 0	6	0 24		10·63	19 52
Monday	..	22	327	6 49	6 0	6	0 24		11·63	20 5
Tuesday	..	23	328	6 50	6 0	6	0 25		12·63	20 18
Wednesday	..	24	329	6 51	6 0	6	0 25		13·63	20 30
Thursday	..	25	330	6 51	6 0	6	0 25		14·63	20 43
Friday	..	26	331	6 52	6 0	6	0 25		15·63	20 55
Saturday	..	27	332	6 52	6 0	6	0 26		16·63	21 6
Sunday	..	28	333	6 53	6 0	6	0 26		17·63	21 17
Monday	..	29	334	6 54	6 0	6	0 26		18·63	21 27
Tuesday	..	30	335	6 54	6 0	6	0 27		19·63	21 37

Phases of the Moon—DECEMBER 31 Days.

☾ Last Quarter 2nd, 9h. 59·0m. P.M. ☽ First Quarter 18th, 8h. 10·4m. P.M.
 ● New Moon 10th, 3h. 33·9m. P.M. ○ Full Moon 25th, 6h. 8·5m. P.M.

Day of the Week.	Day of the Month.	Day of the Year.	Mean Time.						Moon's Age at Noon.	Sun's Declination at Mean Noon.
			Sunrise. A.M.		Sunset. P.M.		True Noon.			
			H.	M.	H.	M.	H.	M.	D.	S.
Wednesday	..	1	6	55	6	0	0	P.M. 28	20·63	21 47
Thursday	..	2	6	55	6	0	0	28	21·63	21 56
Friday	..	3	6	56	6	0	0	28	22·63	22 4
Saturday	..	4	6	57	6	0	0	29	23·63	22 13
Sunday	..	5	6	57	6	0	0	29	24·63	22 20
Monday	..	6	6	58	6	1	0	30	25·63	22 28
Tuesday	..	7	6	59	6	1	0	30	26·63	22 35
Wednesday	..	8	6	59	6	1	0	30	27·63	22 41
Thursday	..	9	7	0	6	1	0	31	28·63	22 48
Friday	..	10	7	0	6	2	0	31	29·63	22 54
Saturday	..	11	7	1	6	2	0	32	0·88	23 0
Sunday	..	12	7	2	6	2	0	32	1·88	23 4
Monday	..	13	7	2	6	3	0	33	2·88	23 8
Tuesday	..	14	7	3	6	3	0	33	3·88	23 12
Wednesday	..	15	7	3	6	3	0	34	4·88	23 15
Thursday	..	16	7	4	6	4	0	34	5·88	23 18
Friday	..	17	7	4	6	4	0	35	6·88	23 21
Saturday	..	18	7	5	6	5	0	35	7·88	23 24
Sunday	..	19	7	5	6	5	0	36	8·88	23 25
Monday	..	20	7	6	6	6	0	36	9·88	23 26
Tuesday	..	21	7	7	6	6	0	37	10·88	23 27
Wednesday	..	22	7	7	6	6	0	37	11·88	23 27
Thursday	..	23	7	8	6	7	0	38	12·88	23 26
Friday	..	24	7	8	6	7	0	38	13·88	23 26
Saturday	..	25	7	9	6	8	0	39	14·88	23 24
Sunday	..	26	7	9	6	9	0	39	15·88	23 22
Monday	..	27	7	10	6	9	0	40	16·88	23 20
Tuesday	..	28	7	10	6	10	0	40	17·88	23 18
Wednesday	..	29	7	11	6	10	0	41	18·88	23 15
Thursday	..	30	7	11	6	11	0	41	19·88	23 11
Friday	..	31	7	11	6	11	0	42	20·88	23 7

CALENDAR FOR 1921.

January.

S.	.....	...	2	9	16	23	30
M.	.....	...	3	10	17	24	31
Tu.	.....	...	4	11	18	25	...
W.	.....	...	5	12	19	26	...
Th.	.....	...	6	13	20	27	...
F.	.....	...	7	14	21	28	...
S.	.....	...	1	8	15	22	29

February.

S.	.....	...	6	13	20	27	...
M.	.....	...	7	14	21	28	...
Tu.	.....	...	1	8	15	22	...
W.	.....	...	2	9	16	23	...
Th.	.....	...	3	10	17	24	...
F.	.....	...	4	11	18	25	...
S.	.....	...	5	12	19	26	...

March.

S.	.....	...	6	13	20	27	...
M.	.....	...	7	14	21	28	...
Tu.	.....	...	1	8	15	22	29
W.	.....	...	2	9	16	23	30
Th.	.....	...	3	10	17	24	31
F.	.....	...	4	11	18	25	...
S.	.....	...	5	12	19	26	...

April.

S.	.....	...	3	10	17	24	...
M.	.....	...	4	11	18	25	...
Tu.	.....	...	5	12	19	26	...
W.	.....	...	6	13	20	27	...
Th.	.....	...	7	14	21	28	...
F.	.....	...	1	8	15	22	29
S.	.....	...	2	9	16	23	30

May.

S.	.....	...	1	8	15	22	29
M.	.....	...	2	9	16	23	30
Tu.	.....	...	3	10	17	24	31
W.	.....	...	4	11	18	25	...
Th.	.....	...	5	12	19	26	...
F.	.....	...	6	13	20	27	...
S.	.....	...	7	14	21	28	...

June.

S.	.....	...	5	12	19	26	...
M.	.....	...	6	13	20	27	...
Tu.	.....	...	7	14	21	28	...
W.	.....	...	1	8	15	22	29
Th.	.....	...	2	9	16	23	30
F.	.....	...	3	10	17	24	...
S.	.....	...	4	11	18	25	...

July.

S.	.....	...	3	10	17	24	31
M.	.....	...	4	11	18	25	...
Tu.	.....	...	5	12	19	26	...
W.	.....	...	6	13	20	27	...
Th.	.....	...	7	14	21	28	...
F.	.....	...	1	8	15	22	29
S.	.....	...	2	9	16	23	30

August.

S.	.....	...	7	14	21	28	...
M.	.....	...	1	8	15	22	29
Tu.	.....	...	2	9	16	23	30
W.	.....	...	3	10	17	24	31
Th.	.....	...	4	11	18	25	...
F.	.....	...	5	12	19	26	...
S.	.....	...	6	13	20	27	...

September.

S.	.....	...	4	11	18	25	...
M.	.....	...	5	12	19	26	...
Tu.	.....	...	6	13	20	27	...
W.	.....	...	7	14	21	28	...
Th.	.....	...	1	8	15	22	29
F.	.....	...	2	9	16	23	30
S.	.....	...	3	10	17	24	...

October.

S.	.....	...	2	9	16	23	30
M.	.....	...	3	10	17	24	31
Tu.	.....	...	4	11	18	25	...
W.	.....	...	5	12	19	26	...
Th.	.....	...	6	13	20	27	...
F.	.....	...	7	14	21	28	...
S.	.....	...	1	8	15	22	29

November.

S.	.....	...	6	13	20	27	...
M.	.....	...	7	14	21	28	...
Tu.	.....	...	1	8	15	22	29
W.	.....	...	2	9	16	23	30
Th.	.....	...	3	10	17	24	...
F.	.....	...	4	11	18	25	...
S.	.....	...	5	12	19	26	...

December.

S.	.....	...	4	11	18	25	...
M.	.....	...	5	12	19	26	...
Tu.	.....	...	6	13	20	27	...
W.	.....	...	7	14	21	28	...
Th.	.....	...	1	8	15	22	29
F.	.....	...	2	9	16	23	30
S.	.....	...	3	10	17	24	31

TABLE OF CONTENTS.

	PAGE		PAGE
India in 1919	1	Burma Native States	108
The History of India in Outline ..	2	Assam Native States	109
The Government of India	15	Central Provinces Native States..	110
The Imperial Legislative Council ..	21	Kashmir	110
The Home Government	24	Native States' Tribute	112
The Provincial Governments	26	Portuguese India	113
Administrative Divisions	28	French India	116
The Bombay Presidency	29	Indian Frontiers	119
The Madras Presidency	34	Persian Gulf	120
The Bengal Presidency	38	Persia and Seistan	128
The United Provinces	44	New Agreements with Persia ..	128
The Punjab	49	Independent Territory	133
Burma	55	Afghanistan	136
Bihar and Orissa	61	The Afghan War	137
The Central Provinces and Berar..	65	Tibet	138
North-West Frontier Province ..	70	North-Eastern Frontier	141
Assam	73	Copyright	142
Baluchistan	75	Railways to India	143
Andaman and Nicobar Islands ..	76	Foreign Consular Officers in India .	145
Coorg	76	Army in India	149
Ajmer-Merwara	76	Mesopotamia	155
Aden	77	War in East Africa	157
Native States	79	Gallipoli	157
Hyderabad	80	Indian Defence Force	160
Mysore	82	East Indies Squadron	168
Baroda	84	Royal Indian Marine	169
Baluchistan Agency	85	Indian Finance	173
Rajputana Agency	86	Land Revenue	180
Central India Agency	90	Excise	182
Sikkim	92	Salt and Customs	183
Bhutan	93	Income Tax	184
Nepal	93	Debt	185
North-West Frontier States ..	94	Mint and Coinage	194
Madras Native States	95	Paper Currency	196
Bombay Native States	96	Gold Reserve Fund	199
Bengal Native States	103	Gross Revenue	200
Bihar and Orissa Feudatory		Railways	202
States	104	Railway Statistics	215
United Provinces Native States..	105	Irrigation	223
The Punjab Native States ..	106	Wells and Tanks	229

	PAGE		PAGE
Buildings and Roads	230	Paper Making	337
School of Oriental Studies	231	Mines and Minerals	338
Trade of India	232	Iron Ore	340
The Trade of the Year	232	Manganese Ore	340
The Import Trade	235	Gold	340
The Export Trade	247	Petroleum	342
Direction of Trade	256	Cremation	345
Frontier Trade	258	Industrial Arts	346
Customs Revenue	259	Fisheries	350
Shipping	259	Opium Trade	354
Gold and Silver	259	Glass and Glassware	355
Balance of Trade	260	Wild Birds' Plumage	356
Gold Absorption	261	Breweries	357
Commercial Intelligence System	263	Grain Elevators	357
Adulteration of Produce	263	Trade Marks	357
Civil Veterinary	264	Hides, Skins and Leather	358
Indian Cotton Duties Act	265	Inventions and Designs	359
Indian Cotton Committee	267	Weights and Measures	361
Banking	271	Legislation and Inspection	363
Exchange Banks	274	Life Insurance	364
Joint Stock Banks	276	Chambers of Commerce	369
Agents in India of London Banks	277	Indian Industrial Conference	378
Wages and Income	281	People of India	280
Native Private Bankers and		Towns and Villages	384
Shroffs	278	Cities	386
Bank Rate	279	Religions	392
Bankers' Clearing Houses	280	Social Institutions	398
Failures of Indian Banks	276	Sex	400
Agriculture	282	Marriage	400
Agricultural Progress	288	Occupations	404
Meteorology	297	Domestic Servants	409
Monsoon of 1919	304	Education	410
The Textile Industry	309	The Mahomedan University	418
The Jute Industry	315	Patna University	418
The Wool Industry	320	Mysore University	418
Hydro-Electric Development	321	Dacca University	418
Silk	324	Local Self-Government	434
Indigo	325	Presidency Towns	436
Tea	327	District and Local Boards	437
Coffee	330	Policy of Government defined	433
Forests	331	Progress in Sanitation	441
Rubber Cultivation	336	Medical Institutions	446
Match Factories	336	Tropical Diseases	447

	PAGE		PAGE
Drug Culture.. ..	457	Warrant of Precedence	561
The Cocaine Traffic	460	Salutes	565
Indian Tobacco	461	Salaries	568
Calcutta Improvement Trust ..	462	Industries Commission	574
Bombay Improvement Trust ..	463	Indian Orders.. ..	577
The Indian Ports	465	The Star of India	577
Chittagong	468	The Order of the Indian Empire..	580
Vizagapatam Harbour Project ..	468	Order of the Crown of India ..	589
Famine	469	Kaisar-i-Hind Medal	590
Boy Scouts	472	Indian Names and Titles	597
Co-operative Movement	473	Laws and the Administration of	
Currency Commission Report ..	485	Justice	600
Gills and Oil Cakes	488	The Indian Police	607
Women's Medical Service for India	489	Jails	611
Countess of Dufferin's Fund ..	490	The Laws of 1919	615
Nursing	491	Imperial Legislative Council —	620
Indians Abroad —	493	Bombay Legislative Council —	635
Indians in Great Britain	501	Madras Legislative Council.. ..	637
Appointments to the Indian Services	503	Bengal Legislative Council	638
Sterling Equivalents	509	United Provinces Legislative Council	640
The Indian Civil Service	510	Punjab Legislative Council	641
The Indian Medical Service.. ..	514	Burma Legislative Council	642
Pilot Services	521	Constitutional Reform	645
The Press	522	Montagu-Chelmsford Report	645
Indian Press Law	532	Government of India's Despatch..	652
Societies: Literary, Scientific and		Report on Franchise	656
Social	533	Work of Joint Select Committee ..	665
Association of University Women		The Royal Proclamation	669
in India	540	Indian National Congress	671
Principal Clubs in India	542	Moslem League	675
The Church	544	Post and Telegraphs	681
Roman Catholic Church	549	Scientific Surveys	685
Scottish Churches	550	Imperial Institute	687
Baptist Societies	551	The Public Trustee	688
Presbyterian Societies	553	Freemasonry	691
Congregational Societies	554	Indian Architecture	694
All-India Missions	555	Archæology	697
Ladies' Societies	556	Tidal Constants	700
Disciple Societies.. ..	556	Manners and Customs	701
Undenominational Missions ..	557	Indian Names	703
Lutheran Societies	557	Indian Art	705
Methodist Societies	558	Routes between India and Europe..	709
Royal Army Temperance Asso-		The Suez Canal	709
ciation	559		

	PAGE		PAGE
Travel in India	711	Chronicle of the Year	767
An Indian Glossary	714	Bibliography of India	773
The New Capital	722	Stock Exchange	776
Indian Official Reports	729	Indian Stamp Duties	777
Customs Tariff	730	Wireless Telegraphy	779
Red Cross Work	754	Who's Who in India	780
The Victoria Cross	755	Indian Time	828
Passport Regulations	756	Calendar	829
Sport in India	757	The Disturbances	830
Interest Table	766	Index	831

Maps.

	PAGE
The Indian Empire (Facing Preface).	
Mesopotamia	121
Persian Gulf	123
Anglo-Russia Agreement	125
The Middle East	129
North-Western Frontiers	131
Baghdad Railway	144
Plan of the New Imperial Capital	724

India in 1919.

The conclusion of the Armistice, which for practical purposes ended the war, was filled with immense enthusiasm throughout India. Extravagant hopes were based on the cessation of hostilities, and throughout the land there was the mistaken belief that the country would soon return to normal conditions. These hopes were doomed to disappointment. The rains in 1918 were poor, and the crops were small, a matter of vital concern to a people seventy per cent. of whom depend on agriculture for their subsistence. Stocks of food grains in the country were short owing to the large exports during the war period. There was therefore a period of very high prices, and actual shortage of food, after the war ended; this necessitated intimate control over prices and supplies by Government, always difficult and irritating in practice. These economic distresses were aggravated by the rains to which some provinces, and particularly the Punjab, had been put in order to aid under a voluntary system sufficient recruits. The discontents were intensified by a strong agitation throughout the country over the passage of what is called the Rowlatt Act. A strong committee of jurists under the chairmanship of a distinguished English Judge, Sir Sidney Rowlatt, was appointed to inquire into the growth and existence of anarchical crime in India and especially in Bengal. This committee recommended that the Government of India should arm themselves with special powers to deal with such crime, to come into operation when it attained proportions dangerous to public safety. Legislation on the lines of the Committee's report was introduced in the Imperial Legislative Council and carried against the solid opposition of the unofficial members. This was the signal for the violent agitation throughout the country, which caused immense disturbance of the public mind.

Riots occurred at Calcutta and Delhi, but the most serious disturbances were at Amritsar, the sacred city of the Sikhs. The crowd came into collision with the authorities, it was shed upon, and casualties were sustained. Amritsar became the scene of riot, murder and arson. The station was attacked and an English guard murdered; the buildings of the National Bank were burnt and the manager and accountant murdered; and the premises of the Alliance Bank were attacked and the manager murdered. An English missionary lady was severely beaten. The military under General Dyer took command of the situation and a proclaimed meeting being held at the Jhallianwallah Bagh it was fired upon by General Dyer's orders and between four and five hundred people were killed. The disorders at Amritsar then ceased, but widespread disturbances took place in the Punjab, telegraph wires were cut and trains interrupted and Government buildings burned. Martial law was proclaimed over a wide area and order was everywhere restored during the early part of May.

Simultaneously considerable disorders occurred in the Bombay Presidency on the

incorrect news that Mr. M. K. Ghandi, a well known Indian publicist, had been arrested, whereas he had only been prevented from entering Delhi or the Punjab. The mob burnt many Government buildings at Ahmedabad and hacked an English sergeant of police to death; it burnt the railway station of Viramgam and murdered an Indian official. Bombay city hung on the brink of a bloody riot.

Considerable feeling was aroused at the character of the measures taken to restore order in Amritsar and under martial law in the Punjab. It inspired strong opposition to the passage of the usual Indemnity Bill through the Imperial Legislative Council, and led to the appointment of a strong Commission under Lord Hunter to inquire into the origin of the disturbances and the nature of the measures taken to suppress them. This Commission began its sittings in November in public, and the evidence taken aroused a great storm of indignation. This indignation fastened on two points; the loss of life at the Jhallianwallah Bagh and the evidence in some cases of action taken under martial law not to punish or prevent but to humiliate. The Commission is still sitting.

These events overshadowed in the latter part of the year the great work being done to place India on the path to self-governing institutions. Reference was made in earlier editions of the Year Book to the visit of the Secretary of State, Mr. Montagu, to India and his joint report with the Viceroy on Indian constitutional reform. The keynote of that report is the establishment of an immediate measure of responsible government in the Provinces, through committing certain branches of the administration to Indian Ministers chosen from the Legislative Councils and the liberalisation of the Government of India. A Bill framed on the lines of this report was examined by a Joint Committee of Parliament during the summer and still further liberalised and improved was presented to both Houses of Parliament in November. It passed rapidly through both Houses, and received the Royal Assent in December, accompanied by a generous Proclamation to the Indian people and the promise of a wide amnesty for political offences. The extreme wing of Indian politics professed to regard the Act as disappointing and unsatisfactory, whilst determining to work with it; the Centre Party hailed it as a liberal and satisfactory measure, affording to India the opportunity of ultimately obtaining self-government by work within the Councils. Whilst these two points of view are the most vocal, the silent middle classes of India generally welcome the measure as liberal and statesmanlike, and as going as far in the direction of reform as is practicable with an unconstructed electorate and without any diffused experience of administration amongst Indians. The new constitution is to be inaugurated by the Prince of Wales towards the close of 1920.

The History of India in Outline.

No history of India can be proportionate, and the briefest summary must suffer from the same defect. Even a wholesale acceptance as history of mythology, tradition, and folklore will not make good, though it makes picturesque, the many gaps that exist in the early history of India: and, though the labours of modern geographers and archaeologists have been amazingly fruitful, it cannot be expected that these gaps will ever be filled to any appreciable extent. Approximate accuracy in chronology and an outline of dynastic facts are all that the student can look for up to the time of Alexander, though the briefest excursion into the by-ways of history will reveal to him many alluring and mysterious fields for speculation. There are, for example, to this day castes that believe they sprang originally from the loins of a being who landed "from an impossible boat on the shores of a highly improbable sea"; and the great epic poems contain plentiful statements equally difficult of reconciliation with modern notions of history as a science. But from the Jataka stories and the Puranas, much valuable information is to be obtained, and, for the benefit of those unable to go to these and other original sources, it has been distilled by a number of writers.

The orthodox Hindu begins the political history of India more than 3,000 years before Christ, with the war waged on the banks of the Jumna between the sons of Kuru and the sons of Pandu; but the modern critic prefers to omit several of those remote centuries and to take 600 B. C., or thereabouts, as his starting point. At that time much of the country was covered with forest, but the Aryan races, who had entered India from the north, had established in parts a form of civilization far superior to that of the aboriginal savages, and to this day there survive cities, like Benares, founded by those invaders. In like manner the Dravidian invaders from an unknown land, who overran the Deccan and the Southern part of the Peninsula, crushed the aborigines, and, at a much later period, were themselves subdued by the Aryans. Of these two civilizing forces, the Aryan is the better known, and of the Aryan kingdoms the first of which there is authentic record is that of Magadha, or Bihar, on the Ganges. It was in, or near, this powerful kingdom that Jainism and Buddhism had their origin, and the fifth King of Magadha, Bimbisara by name, was the friend and patron of Gautama Buddha. The King mentioned was a contemporary of Darius, autocrat of Persia (521 to 485 B. C.) who annexed the Indus valley and formed from his conquest an Indian satrapy which paid as tribute the equivalent of about one million sterling. Detailed history, however, does not become possible until the invasion of Alexander in 326 B.C.

Alexander the Great.

That great soldier had crossed the Hindu Kush in the previous year and had captured Aornos, on the Upper Indus. In the spring of 326 he crossed the river at Ohind, received the submission of the King of Taxila, and marched against Porus who ruled the fertile country between the rivers Hydaspes (Jhelum) and

Akesines (Chenab). The Macedonian carried all before him, defeating Porus at the battle of the Hydaspes, and crossing the Chenab and Ravi. But at the River Hyphasis (Bias) his weary troops mutinied, and Alexander was forced to turn back and retire to the Jhelum where a fleet to sail down the rivers to the sea was nearly ready. The wonderful story of Alexander's march through Mekran and Persia to Babylon, and of the voyage of Nearchus up the Persian Gulf is the climax to the narrative of the invasion but is not part of the history of India. Alexander had stayed nineteen months in India and left behind him officers to carry on the Government of the kingdoms he had conquered: but his death at Babylon, in 323, destroyed the fruits of what has to be regarded as nothing but a brilliant raid, and within two years his successors were obliged to leave the Indian provinces, heavily scarred by war but not hellenized.

The leader of the revolt against Alexander's generals was a young Hindu, Chandragupta who was an illegitimate member of the Royal Family of Magadha. He dethroned the ruler of that kingdom, and became so powerful that he is said to have been able to place 600,000 troops in the field against Seleucus, to whom Babylon had passed on the death of Alexander. This was too formidable an opposition to be faced, and a treaty of peace was concluded between the Syrian and Indian monarchs which left the latter the first paramount Sovereign of India (321 B. C.) with his capital at Pataliputra, the modern Patna and Bankipore. Of Chandragupta's court and administration a very full account is preserved in the fragments that remain of the history compiled by Megasthenes, the ambassador sent to India by Seleucus. His memorable reign ended in 297 B. C. when he was succeeded by his son Bindusara, who in his turn was succeeded by Asoka (269—231 B. C.) who recorded the events of his reign in numerous inscriptions. This king, in an unusually bloody war, added to his dominions the kingdom of Kalinga (the Northern Circar) and then becoming a convert to Buddhism, resolved for the future to abstain from conquest by force of arms. The consequences of the conversion of Asoka were amazing. He was not intolerant of other religions, and did not endeavour to force his creed on his "children". But he initiated measures for the propagation of his doctrine with the result that "Buddhism, which had hitherto been a merely local sect in the valley of the Ganges, was transformed into one of the greatest religions of the world—the greatest, probably, if measured by the number of adherents. This is Asoka's claim to be remembered; this it is which makes his reign an epoch, not only in the history of India, but in that of the world." The wording of his edicts reveal him as a great king as well as a great missionary, and it is to be hoped that the excavations now being carried on in the ruins of his palace may throw yet more light on his character and times. On his death the Maurya kingdom fell to pieces. Even during his reign there had been signs of new forces at work on the borderland of India; where the inde-

pendent kingdoms of Bactria and Parthia had been formed, and subsequent to it there were frequent Greek raids into India. The Greeks in Bactria, however, could not withstand the overwhelming force of the westward migration of the Yueh-chi horde, which, in the first century A. D., also ousted the Indo-Parthian kings from Afghanistan and North-Western India.

The first of these Yueh-chi kings to annex a part of India was Kadphises II (A. D. 85—125), who had been defeated in a war with China, but crossed the Indus and consolidated his power eastward as far as Benares. His son Kanishka (whose date is much disputed) left a name which to Buddhists stands second only to that of Asoka. He greatly extended the boundaries of his empire in the North, and made Peshawar his capital. Under him the power of the Kushan clan of the Yueh-chi reached its zenith and did not begin to decay until the end of the second century, concurrently with the rise in middle India of the Andhra dynasty which constructed the Amaravati stupa, 'one of the most elaborate and precious monuments of piety ever raised by man.'

The Gupta Dynasty.

Early in the fourth century there arose, at Pataliputra, the Gupta dynasty which proved of great importance. Its founder was a local chief, his son Samudragupta, who ruled for some fifty years from A.D. 326, was a king of the greatest distinction. His aim of subduing all India was not indeed fulfilled but he was able to exact tribute from the kingdoms of the South and even from Ceylon, and, in addition to being a warrior, he was a patron of the arts and of Sanskrit literature. The rule of his son, Chandragupta, was equally distinguished and is commemorated in an inscription on the famous iron pillar near Delhi, as well as in the writings of the Chinese pilgrim Fa-hien who pays a great tribute to the equitable administration of the country. It was not until the middle of the fifth century that the fortunes of the Gupta dynasty began to wane—the face of the onset of the White Huns from Central Asia—and by 480 the dynasty had disappeared. The following century all over India was one of great confusion, apparently marked only by the rise and fall of petty kingdoms, until a monarch arose, in A.D. 606, capable of consolidating an Empire. This was the Emperor Harsha who, from Thanasar near Umbala, conquered Northern India and extended his territory South to the Nerbudda. Imitating Asoka in many ways, this Emperor set "felt no embarrassment in paying adoration in turn to Siva, the Sun, and Buddha at a great public ceremonial." Of his times a graphic picture has been handed down in the work of the Chinese "Master of the Law," Hsien Tsiang by name. Harsha was the last native paramount sovereign of Northern India; on his death in 648 his throne was usurped by a minister, whose treacherous conduct towards an embassy from China was quickly avenged, and the kingdom so laboriously established passed into a state of internecine strife which lasted for a century and a half.

The Andhras and Rajputs.

In the meantime in Southern India the Andhras had attained to great prosperity and

carried on a considerable trade with Greece, Egypt and Rome, as well as with the East. Their domination ended in the fifth century A.D. and a number of new dynasties, of which the Pallavas were the most important, began to appear. The Pallavas made way in turn for the Chalukyas, who for two centuries remained the most important Deccan dynasty, one branch uniting with the Cholas. But the fortunes of the Southern dynasties are so involved, and in many cases so little known; that to recount them briefly is impossible. Few names of note stand out from the records except those of Vikramaditya (11th century, and a few of the later Hindu rulers who made a stand against the growing power of Islam, of the rise of which an account is given below. In fact the history of mediæval India is singularly devoid of unity. Northern India was in a state of chaos from about 650 to 950 A.D. not unlike that which prevailed in Europe of that time, and materials for the history of these centuries are very scanty. In the absence of any powerful rulers the jungle began to gain back what had been wrested from it: ancient capitals fell into ruins from which in some cases they have not even yet been disturbed, and the aborigines and various foreign tribes began to assert themselves so successfully that the Aryan element was chiefly confined to the Doab and the Eastern Punjab. It is not therefore so much for the political as for the religious and social history of this anarchical period that one must look. And the greatest event—if a slow process may be called an event—of the middle ages was the transition from tribe to caste, the final disappearance of the old four-fold division of Brahmans; Kshatriyas, Vaisyas, and Sudras, and the formation of the new division of pure and impure largely resting upon a classification of occupations. But this social change was only a part of the development of the Hindu religion into a form which would include in its embrace the many barbarians and foreigners in the country who were outside it. The great political event of the period was the rise of the Rajputs as warriors in the place of the Kshatriyas. Their origin is obscure but they appeared in the 8th century and spread, from their two original homes in Rajputana and Oudh, into the Punjab, Kashmir, and the Central Himalayas, assimilating a number of fighting clans and binding them together with a common code. At this time Kashmir was a small kingdom which exercised an influence on India wholly disproportionate to its size. The only other kingdom of importance was that of Kanauj—in the Doab and Southern Oudh—which still retained some of the power to which it had reached in the days of Harsha, and of which the renown extended to China and Arabia.

With the end of the period of anarchy, the political history of India centres round the Rajputs. One clan founded the kingdom of Gujarat, another held Malwa, another (the Chauhans) founded a kingdom of which Ajmer was the capital, and so on. Kanauj fell into the hands of the Rathors (c. 1040 A.D.) and the dynasty then founded by that branch of the Gaharwars of Benares became one of the most famous in India. Later in the same century the Chauhans were united, and by

1163 one of them could boast that he had conquered all the country from the Vindhya to the Himalayas, including Delhi already a fortress a hundred years old. The son of this conqueror was Prithwi Raj, the champion of the Hindus against the Mahomedans. With his death in battle (1192) ends the golden age of the new civilization that had been evolved out of chaos; and of the greatness of that age there is a splendid memorial in the temples and forts of the Rajput states and in the two great philosophical systems of Sankaracharya (ninth century) and Ramanuja (twelfth century). The triumph of Hinduism had been achieved, it must be added, at the expense of Buddhism, which survived only in Magadha at the time of the Mahomedan conquest and speedily disappeared there before the new faith.

Mahomedan India.

The wave of Mahomedan invaders that eventually swept over the country first touched India, in Sind, less than a hundred years after the death of the Prophet in 632. But the first real contact was in the tenth century when a Turkish slave of a Persian ruler founded a kingdom at Ghazni, between Kabul and Kandahar. A descendant of his, Mahmud (967-1030) made repeated raids into the heart of India, capturing places so far apart as Multan, Kanaui, Gwalior, and Somnath in Kathiawar, but permanently occupying only a part of the Punjab. Enduring Mahomedan rule was not established until the end of the twelfth century, by which time, from the little territory of Ghor, there had arisen one Mahomed Ghori capable of carving out a kingdom stretching from Peshawar to the Bay of Bengal. Prithwi Raj, the Chauhan ruler of Delhi and Ajmer, made a brave stand against, and once defeated, one of the armies of this ruler, but was himself defeated in the following year. Mahomed Ghori was murdered at Lahore (1206) and his vast kingdom, which had been governed by satraps, was split up into what were practically independent sovereignties. Of these satraps, Qutb-ud-din, the slave ruler of Delhi and Lahore, was the most famous, and is remembered by the great mosque he built near the modern Delhi. Between his rule and that of the Mughals, which began in 1526, only a few of the many Kings who governed and fought and built beautiful buildings, stand out with distinction. One of these was Ala-ud-din (1296-1316), whose many expeditions to the south much weakened the Hindu Kings, and who proved himself to be a capable administrator. Another was Firoz Shah, of the house of Tughlaq, whose administration was in many respects admirable, but which ended, on his abdication, in confusion. In the reign of his successor, Mahmud (1398-1413), the kingdom of Delhi went to pieces and India was for seven months at the mercy of the Turkish conqueror Taimur. It was the end of the fifteenth century before the kingdom, under Sikandar Lodi, began to recover. His son, Ibrahim, still further extended the kingdom that had been recreated, but was defeated by Babar, King of Kabul, at Panipat, near Delhi, in 1526, and there was then established in India the Mughal dynasty.

The Mahomedan dynasties that had ruled in capitals other than Delhi up to this date

were of comparative unimportance, though some great men appeared among them. In Gujarat, for example, Ahmad Shah, the founder of Ahmedabad, showed himself a good ruler and builder as well as a good soldier, though his grandson, Mahmud Shah Begara, was a greater ruler—acquiring fame at sea as well as on land. In the South various kings of the Bahmani dynasty made names for themselves, especially in the long wars they waged on the new Hindu kingdom that had arisen which had its capital at Vijayanagar. Of importance also was Adil Khan, a Turk, who founded (1490) the Bijapur dynasty of Adil Shahis. It was one of his successors who crushed the Vijayanagar dynasty, and built the great mosque for which Bijapur is famous.

The Mughal Empire.

As one draws near to modern times it becomes impossible to present anything like a coherent and consecutive account of the growth of India as a whole. Detached threads in the story have to be picked up one by one and followed to their ending, and although the sixteenth century saw the first European settlements in India, it will be convenient here to continue the narrative of Mahomedan India almost to the end of the Mughal Empire. How Babar gained Delhi has already been told. His son, Humayun, greatly extended his kingdom, but was eventually defeated (1540) and driven into exile by Sher Khan, an Afghan of great capabilities, whose short reign ended in 1545. The Sur dynasty thus founded by Sher Khan lasted another ten years when Humayun having snatched Kabul from one of his brothers, was strong enough to win back part of his old kingdom. When Humayun died (1556) his eldest son, Akbar, was only 13 years old and was confronted by many rivals. Nor was Akbar well served, but his career of conquest was almost uninterrupted and by 1594 the whole of India North of the Nerbudda had bowed to his authority, and he subsequently entered the Deccan and captured Ahmednagar. This great ruler, who was as remarkable for his religious tolerance as for his military prowess, died in 1605, leaving behind him a record that has been surpassed by few. His son, Jehangir, who married the Persian lady Nur Jahan, ruled until 1627, bequeathing to an admiring posterity some notable buildings—the tomb of his father at Sikandra, part of the palace at Agra, and the palace and fortress of Lahore. His son, Shahjahan, was for many years occupied with wars in the Deccan, but found time to make his court of incredible magnificence and to build the most famous and beautiful of all tombs, the Taj Mahal, as well as the fort, palace and Juma Masjid at Delhi. The quarrels of his sons led to the deposition of Shahjahan by one of them, Aurangzeb, in 1658. This Emperor's rule was one of constant intrigue and fighting in every direction, the most important of his wars being a twenty-five years' struggle against the Marathas of the Deccan who, under the leadership of Sivaji, became a very powerful faction in Indian politics. His bigoted attitude towards Hinduism made Aurangzeb all the more anxious to establish his Empire on a firm basis in the south, but he was unable to hold his many conquests, and on his death (1707) the

Empire, for which his three sons were fighting, could not be held together. Internal disorder and Maratha encroachments continued during the reigns of his successors, and in 1739 a fresh danger appeared in the person of Nadir Shah, the Persian conqueror, who carried all before him. On his withdrawal, leaving Mahomed Shah on the throne, the old intrigues recommenced and the Marathas began to make the most of the opportunity offered to them by puppet rulers at Delhi and by almost universal discord throughout what had been the Mughal Empire. There is little to add to the history of Mahomedan India. Emperors continued to reign in name at Delhi up to the middle of the 19th century, but their territory and power had long since disappeared, being swallowed up either by the Marathas or by the British.

European Settlements.

The voyage of Vasco da Gama to India in 1498 was what turned the thoughts of the Portuguese to the formation of a great Empire in the East. That idea was soon realized, for, from 1500 onwards, constant expeditions were sent to India and the first two Viceroy's in India—Almeida and Albuquerque—laid the foundations of a great Empire and of a great trade monopoly. Goa, taken in 1510, became the capital of Portuguese India and remains to this day in the hands of its captors, and the countless ruins of churches and forts on the shores of Western India, as also farther East at Malacca, testify to the zeal with which the Portuguese endeavoured to propagate their religion and to the care they took to defend their settlements. There were great soldiers and great missionaries among them—Albuquerque, da Cunha, da Castro in the former class, St. Francis Xavier in the latter. But the glory of Empire loses something of its lustre when it has to be paid for, and the constant drain of men and money from Portugal, necessitated by the attacks made on their possessions in India and Malaya, was found almost intolerable. The junction of Portugal with Spain, which lasted from 1580 to 1640, also tended to the downfall of the Eastern Empire and when Portugal became independent again, it was unequal to the task of competing in the East with the Dutch and English. The Dutch had little difficulty in wresting the greater part of their territory from the Portuguese, but the seventeenth century naval wars with England forced them to relax their hold upon the coast of India, and during the French wars between 1795 and 1811 England took all Holland's Eastern possessions, and the Dutch have left in India but few traces of their civilisation and of the once powerful East India Company of the Netherlands.

The first English attempts to reach India date from 1496 when Cabot tried to find the North-West passage, and these attempts were repeated all through the sixteenth century. The first Englishman to land in India is said to have been one Thomas Stephens (1579) who was followed by a number of merchant adventurers, but trade between the two countries really dates from 1600 when Elizabeth incorporated the East India Company which had been formed in London. Factories in India were founded only after Portuguese and Dutch opposition had been overcome, notably in the

sea fight off Swally (Suvali) in 1612. The first factory, at Surat, was for many years the most important English foothold in the East. Its establishment was followed by others, including Fort St. George, Madras, (1640) and Hughli (1651). In the history of these early years of British enterprise in India the cession of Bombay (1661) as part of the dowry of Catherine of Braganza stands out as a land-mark; it also illustrates the weakness of the Portuguese at that date, since in return the King of England undertook to protect the Portuguese in India against their foes—the Marathas and the Dutch. Cromwell, by his treaty of 1654, had already obtained from the Portuguese an acknowledgment of England's right to trade in the East; and that right was now threatened, not by the Portuguese, but by Sivaji and by the general disorder prevalent in India. Accordingly, in 1686, the Company turned its attention to acquiring territorial power, and announced its intention to establish such a policy of civil and military power, and create and secure such a large revenue.....as may be the foundation of a large, well-grounded, sure English dominion in India for all time to come. Not much came of this announcement for some time, and no stand could be made in Bengal against the depredations of Aurangzeb. The foundations of Calcutta (1690) could not be laid by Job Charnock until after a humiliating peace had been concluded with that Emperor, and, owing to the difficulties in which the Company found itself in England, there was little chance of any immediate change for the better. The union of the old East India Company with the new one which had been formed in rivalry to it took place in 1708, and for some years peaceful development followed; though Bombay was always exposed by sea to attacks from the pirates, who had many strongholds within easy reach of that port, and on land to attacks from the Marathas. The latter danger was felt also in Calcutta. Internal dangers were numerous and still more to be feared. More than one mutiny took place among the troops sent out from England, and rebellions like that led by Keigwin in Bombay threatened to stifle the infant settlements. The public health was bad and the rate of mortality was at times appalling. To cope with such conditions strong men were needed, and the Company was in this respect peculiarly fortunate; the long list of its servants, from Oxenden and Aungier to Hastings and Raffles, contains many names of men who proved themselves good rulers and far-sighted statesmen, the finest Empire-builders the world has known.

Attempts to compete with the English were made of course. But the schemes of the Emperor Charles VI to secure a share of the Indian trade were not much more successful than those made by Scotland, Denmark, Sweden, and Russia. By the French, who founded Pondicherry and Chandernagore towards the end of the 17th century, much more was achieved, as will be seen from the following outline of the development of British rule.

The French Wars.

When war broke out between England and France in 1744, the French had acquired a

strong position in Southern India, which had become independent of Delhi and was divided into three large States—Hyderabad, Tanjore, and Mysore—and a number of petty states under local chieftains. In the affairs of these States Dupleix, when Governor of Pondicherry, had intervened with success, and when Madras was captured by a French squadron, under La Bourdonnais (1746) Dupleix wished to hand it over to the Nawab of Arcot—a deputy of the Nizam's who ruled in the Carnatic. The French, however, kept Madras, repelling an attack by the disappointed Nawab as well as the British attempts to recapture it. The treaty of Aix-la-Chapelle restored Madras to the English. The fighting had shown the Indian powers the value of European troops, and this was again shown in the next French war (1750-54) when Clive achieved enduring fame by his capture and subsequent defence of Arcot. This war arose from Dupleix supporting candidates for the disputed successions at Arcot and Hyderabad while the English at Madras put forward their own nominees. One of Dupleix's officers, the Marquis de Bussy, persuaded the Nizam to take into his pay the army which had established his power, and in return the Northern Circars, between Orissa and Madras, was granted to the French. This territory, however, was captured by the English in the seven years' war (1756-63). Dupleix had by then been recalled to France. Lally, who had been sent to drive the English out of India, captured Fort St. David and invested Madras. But the victory which Colonel (Sir Eyre) Coote won at Wandiwash (1760) and the surrender of Pondicherry and Gingee put an end to the French ambitions of Empire in Southern India. Pondicherry passed more than once from the one nation to the other before settling down to its present existence as a French colony in miniature.

Battle of Plassey.

While the English were fighting the third French war in the South they became involved in grave difficulties in Bengal, where Siraj-ud-Daula had acceded to power. The headquarters of the English at Calcutta were threatened by that ruler who demanded they should surrender a refugee and should cease building fortifications. They refused and he marched against them with a large army. Some of the English took to their ships and made off down the river, the rest surrendered and were cast into the jail known as the "Black Hole." From this small and stifling room 23 persons, out of 146, came out alive the next day. Clive who was at Madras, immediately sailed for Calcutta with Admiral Watson's squadron, recaptured the town (1757), and, as war with the French had been proclaimed, proceeded to take Chandernagore. The Nawab Siraj-ud-Daula then took the side of the French, and Clive, putting forward Mir Jafar as candidate for the Nawab's throne, marched out with an army consisting of 900 Europeans, 2,000 sepoys and 8 pieces of artillery against the Nawab's host of over 50,000. The result was the historic battle of Plassey (June 23) in which Clive, after hesitating on the course to be pursued, routed the Nawab. Mir Jafar was put on the throne

at Murshidabad, and the price of this honour was put at £ 2,340,000 in addition to the grant to the Company of the land round Calcutta now known as the District of the twenty-four Parganas. In the year after Plassey, Clive was appointed Governor of Bengal and in that capacity sent troops against the French in Madras and in person led a force against the Oudh army that was threatening Mir Jafar, in each case with success. From 1760 to 1765 Clive was in England. During his absence the Council at Calcutta deposed Mir Jafar and, for a price, put Mir Kasim in his place. This ruler moved his capital to Monghyr, organized an army, and began to intrigue with the Nawab Wazir of Oudh. He soon found, in a dispute over customs dues, an opportunity of quarrelling with the English and the first shots fired by his followers were the signal for a general rising in Bengal. About 200 Englishmen and a number of sepoys were massacred, but his trained regiments were defeated at Gheria and Oodeynullah, and Mir Kasim sought protection from the Nawab of Oudh. But in 1764, after quelling a sepoy mutiny in his own camp by blowing 24 ringleaders from the guns, Major (Sir Hector) Munro defeated the joint forces of Shah Alam, the Mughal Emperor, and the Nawab of Oudh in the battle of Buxar. In 1765 Clive (now Baron Clive of Plassey) returned as Governor. "Two landmarks stand out in his policy. First, he sought the substance, although not the name, of territorial power, under the fiction of a grant from the Mughal Emperor. Second, he desired to purify the Company's service, by prohibiting illicit gains, and by guaranteeing a reasonable pay from honest sources. In neither respect were his plans carried out by his immediate successors. But our efforts towards a sound administration date from this second Governorship of Clive, as our military supremacy dates from his victory at Plassey." Before Clive left India, in 1767, he had readjusted the divisions of Northern India and had set up a system of Government in Bengal by which the English received the revenues and maintained the army while the criminal jurisdiction was vested in the Nawab. The performance of his second task, the purification of the Company's service, was hotly opposed but carried out. He died in 1774 by his own hand, the House of Commons having in the previous year censured him, though admitting that he did render "great and meritorious services to his country."

Warren Hastings.

The dual system of government that Clive had set up proved a failure and Warren Hastings was appointed Governor, in 1772, to carry out the reforms settled by the Court of Directors which were to give them the entire care and administration of the revenues. Thus Hastings had to undertake the administrative organization of India, and, in spite of the factious attitude of Philip Francis, with whom he fought a duel and of other members of his Council, he reorganized the civil service, reformed the system of revenue collection, greatly improved the financial position of the Company and created courts of justice and some semblance of a police force. From 1772 to 1774 he was Governor of Bengal, and from 1774 to 1777

he was the first Governor-General, nominated under an Act of Parliament passed in the previous year. His financial reforms, and the forced contributions he enacted from the rebellious Chet Singh and the Begam of Oudh, were interpreted in England as acts of oppression and formed, together with his action in the trial of Nuncomar for forgery, the basis of his seven years' trial before the House of Lords which ended in a verdict of not guilty on all the charges. But there is much more for which his administration is justly famous. The recovery of the Marathas from their defeat at Panipat was the cardinal factor that influenced his policy towards the native states. One frontier was closed against Maratha invasion by the loan of a British brigade to the Nawab Wazir of Oudh, for his war against the Rohillas, who were intriguing with the Marathas. In Western India he found himself committed to the two Maratha wars (1775-82) owing to the ambition of the Bombay Government to place its own nominee on the throne of the Peshwa at Poona, and the Bengal troops that he sent over made amends, by the conquest of Gujrat and the capture of Gwalior, for the disgrace of Wadgaon where the Marathas overpowered a Bombay army. In the South—where interference from Madras had already led (1769) to what is known as the first Mysore war, a disastrous campaign against Hyder Ali and the Nizam—he found the Madras Government again in conflict with those two potentates. The Nizam he won over by diplomacy, but against Hyder Ali he had to despatch a Bengal army under Sir Eyre Coote. Hyder Ali died in 1782 and two years later a treaty was made with his son Tipu. It was in these acts of intervention in distant provinces that Hastings showed to best advantage as a great and courageous man, cautious, but swift in action when required. He was succeeded, after an interregnum, by Lord Cornwallis (1786-93) who built on the foundations of civil administration laid by Hastings, by entrusting criminal jurisdiction to Europeans and establishing an Appellate Court of Criminal Judicature at Calcutta. In the Civil Service he separated the functions of the District Collector and Judge and organized the "writers" and "merchants" of the Company into an administrative Civil Service. This system was subsequently extended to Madras and Bombay. Lord Cornwallis is better known for his introduction, on orders from England, of the Permanent Settlement in Bengal. (See article on Land Revenue). A third Mysore war was waged during his tenure of office which ended in the submission of Tipu Sultan. Sir John Shore (Lord Teignmouth), an experienced Civil Servant, succeeded Lord Cornwallis, and, in 1798, was followed by Lord Wellesley, the friend of Pitt, whose projects were to change the map of India.

Lord Wellesley's Policy.

The French in general, and "the Corsican" in particular, were the enemy most to be dreaded for a few years before Lord Wellesley took up his duties in India, and he formed the scheme of definitively ending French schemes in Asia by placing himself at the head of a great Indian confederacy. He started by obtaining from the Nawab of Oudh the cession of

large tracts of territory in lieu of payments overdue as subsidies for British troops, he then won over the Nizam to the British side, and, after exposing the intrigues of Tipu Sultan with the French, embarked on the fourth Mysore war which ended (1799) in the fall of Seringapatam and the gallant death of Tipu. Part of Mysore, the Carnatic, and Tanjore roughly constituting the Madras Presidency of to-day then passed to British rule. The five Maratha powers—the Peshwa of Poona; the Gaekwar of Baroda, Sindhia of Gwalior, Holkar of Indore and the Raja of Nagpur—had still to be brought into the British net. The Peshwa, after being defeated by Holkar, fled to British territory and signed the Treaty of Bassein which led to the third Maratha war (1802-04) as it was regarded by Sindhia and the Raja of Nagpur at a betrayal of Maratha independence. In this the most successful of British campaigns in India, Sir Arthur Wellesley (the Duke of Wellington) and General (Lord) Lake carried all before them, the one by his victories of Assaye and Argaum and the other at Aligad, and Laswari. Later operations, such as Colonel Monson's retreat through Central India were less fortunate. The great acquisitions of territory made under Lord Wellesley proved so expensive that the Court of Directors, becoming impatient, sent out Lord Cornwallis a second time to make peace at any price. He, however, died soon after his arrival in India, and Sir George Barlow carried on the government (1805-7) until the arrival of a stronger ruler, Lord Minto. He managed to keep the peace in India for six years, and to add to British dominions by the conquest of Java and Mauritius. His foreign policy was marked by another new departure, inasmuch as he opened relations with the Punjab, Persia, and Afghanistan, and concluded a treaty with Ranjit Singh, at Lahore, which made that Sikh ruler the loyal ally of the British for life.

The successor of Lord Minto was Lord Moira; who found himself obliged almost at once to declare war on the Gurkhas of Nepal, who had been encroaching on British territory. After initial reverses, the English, under General Ochterlony, were successful and the Treaty of Sagauli (1816) was drawn up which defines British relations with Nepal to the present day. For this success Lord Moira was made Marquis of Hastings. In the same year he made preparations for the last Maratha war (1817-18) which was made necessary by the lawless conduct of the Pindaris, gangs of Pathan or Rohilla origin, whose chief patrons were the rulers of Native States. The large number of 120,000 that he collected for this purpose destroyed the Pindaris, annexed the dominions of the rebellious Peshwa of Poona, protected the Rajput States, made Sindhia enter upon a new treaty, and compelled Holkar to give up part of his territory. Thus Lord Hastings established the British power more firmly than ever, and when he resigned, in 1823, all the Native States outside the Punjab had become parts of the political system and British interests were permanently secured from the Persian Gulf to Singapore. Lord Amherst followed Lord Hastings, and his five years' rule (1823-28) are memorable for the first Burmese war and the capture of Bharatpur. The former opera-

tion was undertaken owing to the insolent demands and raids of the Burmese, and resulted in the Burmese ceding Assam, Aracan, and the coast of Martaban and their claims to the lower provinces. The capture of Lharatpur by Lord Combermere (1826) wiped out the repulse which General Lake had received there twenty years earlier. A disputed succession on this occasion led to the British intervention.

Social Reform.

A former Governor of Madras, Lord William Bentinck, was the next Governor-General. His epitaph by Macaulay, says: "He abolished cruel rites; he effaced humiliating distinctions; he gave liberty to the expression of public opinion; his constant study was to elevate the intellectual and moral character of the nations committed to his charge."

Some of his financial reforms, forced on him from England, and his widening of the gates by which educated Indians could enter the service of the Company, were most unpopular at the time, but were eclipsed by the acts he took for the abolition of *Sati*, or widow-burning, and the suppression—with the help of Captain Sleeman—of the professional hereditary assassins known as *Thugs*. In 1832 he annexed Cachar, and, two years later, Coorg. The incompetence of the ruler of Mysore forced him to take that State also under British administration—where it remained until 1881. His rule was marked in other ways by the despatch of the first steamship that made the passage from Bombay to Suez, and by his settlement of the long educational controversy in favour of the advocates of instruction in English and the vernaculars. Lord William Bentinck left India (1835) with his programme of reforms unfinished. The new Charter Act of 1833 had brought to a close the commercial business of the Company and emphasized their position as rulers of an Indian Empire in trust for the Crown. By it the whole administration, as well the legislation of the country, was placed in the hands of the Governor-General in Council, and authority was given to create a Presidency of Agra. Before his retirement Bentinck assumed the statutory title of Governor-General of India (1834), thus marking the progress of consolidation since Warren Hastings in 1774 became the first Governor-General of Fort William. Sir Charles Metcalfe, being senior member of Council, succeeded Lord William Bentinck, and during his short tenure of office carried into execution his predecessor's measures for giving entire liberty to the press.

Afghan Wars.

With the appointment of Lord Auckland as Governor-General (1836-42) there began a new era of war and conquest. Before leaving London he announced that he looked with exultation to the prospect of "promoting education and knowledge, and of extending the blessings of good Government and happiness to millions in India;" but his administration was almost exclusively comprised in a fatal expedition to Afghanistan, which dragged in its train the annexation of Sind, the Sikh wars, and the inclusion of Baluchistan in the protectorate of India. The first Afghan war was undertaken partly to counter the Russian advance

in Central Asia and partly to place on the throne at Kabul the dethroned ruler Shah Shuja in place of Dost Mahomed. The latter object was easily attained (1839) and for two years Afghanistan remained in the military occupation of the British. In 1841 Sir Alexander Burnes was assassinated in Kabul and Sir William Macnaghten suffered the same fate in an interview with the son of Dost Mahomed. The British Commander in Kabul, Gen. Elphinstone, was old and feeble, and after two months' delay he led his army of 4,500 and 12,000 camp followers back towards India in the depth of winter. Between Kabul and Jallalabad the whole force perished, either at the hands of the Afghans or from cold, and Dr. Brydon was the only survivor who reached the latter city. Lord Ellenborough succeeded Lord Auckland and was persuaded to send an army of retribution to relieve Jallalabad. One force under Gen. Pollock relieved Jallalabad and marched on Kabul, while Gen. Nott, advancing from Kandahar, captured Ghazni and joined Pollock at Kabul (1842). The bazaar at Kabul was blown up, the prisoners rescued, and the army returned to India leaving Dost Mahomed to take undisputed possession of his throne. The drama ended with a bombastic proclamation from Lord Ellenborough and the parade through the Punjab of the (spurious) gates of Somnath taken from the tomb of Mahmud of Ghazni.

Sikh Wars.

Lord Ellenborough's other wars the conquest of Sind by Sir Charles Napier and the suppression of an outbreak in Gwalior—were followed by his recall, and the appointment of Sir Henry (1st Lord) Hardinge to be Governor-General. A soldier Governor-General was not unacceptable, for it was felt that a trial of strength was imminent between the British and the remaining Hindu power in India, the Sikhs. Ranjit Singh, the founder of the Sikh Kingdom, had died in 1839, loyal to the end to the treaty he had made with Metcalfe thirty years earlier. He left no son capable of ruling, and the *khalsa*, or central council of the Sikh army, was burning to measure its strength with the British sepoys. The intrigues of two men, Lal Singh and Fej Singh, to obtain the supreme power led to their crossing the Sutlej and invading British territory. Sir Hugh Gough, the Commander-in-Chief, and the Governor-General hurried to the frontier, and within three weeks four pitched battles were fought—at Mudki, Ferozeshah, Aliwal and Sohraon. The Sikhs were driven across the Sutlej and Lahore surrendered to the British, but the province was not annexed. By the terms of peace the infant Dhuleep Singh was recognized as Rajah; Major Henry Lawrence was appointed Resident, to assist the Sikh Council of Regency, at Lahore; the Jullundur Doab was added to British territory; the Sikh army was limited; and a British force was sent to garrison the Punjab on behalf of the child Rajah. Lord Hardinge returned to England (1848) and was succeeded by Lord Dalhousie, the greatest of Indian proconsuls.

Dalhousie had only been in India a few months when the second Sikh war broke out. In the attack on the Sikh position at Chillianwala the British lost 2,400 officers and men

besides four guns and the colours of three regiments; but before reinforcements could arrive from England, bringing Sir Charles Napier as Commander-in-Chief, Lord Gough had restored his reputation by the victory of Gujrat which absolutely destroyed the Sikh army. As a consequence the Punjab was annexed and became a British province (1849), its pacification being so well carried out, under the two Lawrences that on the outbreak of the Mutiny eight years later it remained not only quiet but loyal. In 1852 Lord Dalhousie had again to embark on war, this time in Burma, owing to the ill-treatment of British merchants in Rangoon. The lower valley of the Irawaddy was occupied from Rangoon to Prome and annexed, under the name of Pegu, to those provinces that had been acquired in the first Burmese war. British territories were enlarged in many other directions during Lord Dalhousie's tenure of office. His "doctrine of lapse" by which British rule was substituted for Indian in States where continued misrule on the failure of a dynasty made this change possible, came into practice in the cases of Satara, Jhansi, and Nagpur (which last-named State became the Central Provinces) where the rulers died without leaving male heirs. Oudh was annexed on account of its misrule. Dalhousie left many other marks on India. He reformed the administration from top to bottom, founded the Public Works Department, initiated the railways, telegraphs and postal system, and completed the great Ganges canal. He also detached the Government of Bengal from the charge of the Governor-General, and summoned representatives of the local Governments to the deliberations of the Government of India. Finally, in education he laid down the lines of a department of public instruction and initiated more practical measures than those devised by his predecessors. It was his misfortune that the mutiny, which so swiftly followed his resignation, was by many critics in England attributed to his passion for change.

The Sepoy Mutiny.

Dalhousie was succeeded by Lord Canning in 1856, and in the following year the sepoys of the Bengal army mutinied and all the valley of the Ganges from Delhi to Patna rose in rebellion. The causes of this convulsion are difficult to estimate, but are probably to be found in the unrest which followed the progress of English civilisation; in the spreading of false rumours that the whole of India was to be subdued; in the confidence the sepoy troops had acquired in themselves under British leadership; and in the ambition of the educated classes to take a greater share in the government of the country. Added to this, there was in the deposed King of Delhi, Bahadur Shah, a centre of growing disaffection. Finally there was the story—not devoid of truth—that the cartridges for the new Enfield rifle were greased with fat that rendered them unclean for both Hindus and Mahomedans. And when the mutiny did break out it found the Army without many of its best officers who were employed in civil work, and the British troops reduced, in spite of Lord Dalhousie's warnings, below the number he considered essential for safety. On May 10

the sepoys at Meerut rose in mutiny, cut down a few Europeans, and, unchecked by the large European garrison, went off to Delhi where next morning the Mahomedans rose. From that centre the mutiny spread through the North-Western Provinces and Oudh into Lower Bengal. Risings in the Punjab were put down by Sir John Lawrence and his subordinates, who armed the Sikhs, and with their help reduced the sepoys, and Lawrence was subsequently able to send a strong body of Sikhs to aid in the siege of Delhi. The native armies of Madras and Bombay remained for the most part true to their colours. In Central India, the contingents of some of the great chiefs joined the rebels, but Hyderabad was kept loyal by the influence of its minister, Sir Salar Jung.

The interest of the war centres round Delhi, Cawnpore and Lucknow, though in other places massacres and fighting occurred. The siege of Delhi began on June 8 when Sir Henry Barnard occupied the Ridge outside the town. Barnard died of cholera early in July, and Thomas Reed, who took his place, was obliged through illness to hand over the command to Archdale Wilson. In August Nicholson arrived with a reinforcement from the Punjab. In the meantime the rebel force in Delhi was constantly added to by the arrival of new bodies of mutineers; attacks were frequent and the losses heavy: cholera and sunstroke carried off many victims on the Ridge: and when the final assault was made in September the Delhi army could only parade 4,720 infantry, of whom 1,960 were Europeans. The arrival of siege guns made it possible to advance the batteries on September 8, and by the 13th a breach was made. On the following day three columns were led to the assault, a fourth being held in reserve. Over the ruins of the Kashmir Gate, blown in by Horne and Salkeld, Col. Campbell led his men and Nicholson formed up his troops within the walls. By nightfall the British, with a loss of nearly 1,200 killed and wounded, had only secured a foothold in the city. Six days' street fighting followed and Delhi was won; but the gallant Nicholson was killed at the head of a storming party. Bahadur Shah was taken prisoner, and his two sons were shot by Captain Hudson.

Massacre at Cawnpore.

At Cawnpore the sepoys mutinied on June 27 and found in Nana Sahib, the heir of the last Peshwa, a willing leader in spite of his former professions of loyalty. There a European force of 240 with six guns had to protect 870 non-combatants, and held out for 22 days, surrendering only on the guarantee of the Nana that they should have a safe conduct as far as Allahabad. They were embarking on the boats on the Ganges when fire was opened on them, the men being shot or hacked to pieces before the eyes of their wives and children and the women being mutilated and murdered in Cawnpore to which place they were taken back. Their bodies were thrown down a well just before Havelock, having defeated the Nana's forces, arrived to the relief. In Lucknow a small garrison held out in the Residency from July 2 to September 25 against tremendous odds and enduring the most fearful hardships. The relieving force, under Havelock and Outram, was itself invested, and the garrison was

not finally delivered until Sir Colin Campbell arrived in November. Fighting continued for 18 months in Oudh, which Sir Colin Campbell finally reduced, and in Central India, where Sir Hugh Rose waged a brilliant campaign against the disinherited Rani of Jhansi—who died at the head of her troops—and Tantia Topi.

Transfer to the Crown.

With the end of the mutiny there began a new era in India, strikingly marked at the outset by the Act for the Better Government of India (1858) which transferred the entire administration from the Company to the Crown. By that Act India was to be governed by, and in the name of, the Sovereign through a Secretary of State, assisted by a Council of fifteen members. At the same time the Governor-General received the title of Viceroy. The European troops of the Company, numbering about 24,000 officers and men were—greatly resenting the transfer—amalgamated with the Royal service, and the Indian Navy was abolished. On November 1, 1858, the Viceroy announced in Durbar at Allahabad that Queen Victoria had assumed the government of India, and proclaimed a policy of justice and religious toleration. A principle already enunciated in the Charter Act of 1833 was reinforced, and all, of every race or creed, were to be admitted as far as possible to those offices in the Queen's service for which they might be qualified. The aim of the Government was to be the benefit of all her subjects in India—"In their prosperity will be our strength, in their contentment our security, and in their gratitude our best reward." Peace was proclaimed in July 1859, and in the cold weather Lord Canning went on tour in the northern provinces, to receive the homage of loyal chiefs and to assure them that the "policy of lapse" was at an end. A number of other important reforms marked the closing years of Canning's Viceroyalty. The India Councils Act (1861) augmented the Governor-General's Council, and the Councils of Madras and Bombay by adding non-official members, European and Indian, for legislative purposes only. By another Act of the same year High Courts of Judicature were constituted. To deal with the increased debt of India, Mr. James Wilson was sent from England to be Financial Member of Council, and to him are due the customs system, income tax, license duty, and State paper currency. The cares of office had broken down the Viceroy's health. Lady Canning died in 1862 and this hastened his departure for England where he died in June of that year. His successor, Lord Elgin, lived only a few months after his arrival in India, and was succeeded by Sir John (afterwards Lord) Lawrence, the "saviour of the Punjab."

Sir John Lawrence.

The chief task that fell to Sir John Lawrence was that of reorganising the Indian military system, and of reconstructing the Indian army. The latter task was carried out on the principle that in the Bengal army the proportion of Europeans to Indians in the infantry and cavalry should be one to two, and in the Madras and Bombay armies one to three: the artillery was to be almost wholly European. The re-organisation was carried out in spite of

financial difficulties and the saddling of Indian revenues with the cost of a war in Abyssinia with which India had no direct concern; but operations in Bhutan were all the drain made on the army in India while the re-organising process was being carried on. Two severe famines—in Orissa (1866) and Bundelkhand and Upper Hindustan (1868-9)—occurred, while Sir John Lawrence was Viceroy, and he laid down the principle for the first time in Indian history, that the officers of the Government would be held personally responsible for taking every possible means to avert death by starvation. He also created the Irrigation Department under Col. (Sir Richard) Strachey. Two commercial crises of the time have to be noted. One seriously threatened the tea industry in Bengal. The other was the consequence of the wild gambling in shares of every description that took place in Bombay during the years of prosperity for the Indian cotton industry caused by the American Civil War. The "Share Mania," however, did no permanent harm to the trade of Bombay, but was, on the other hand, largely responsible for the series of splendid buildings begun in that city during the Governorship of Sir Bartle Frere. Sir John Lawrence retired in 1869, having passed through every grade of the service, from an Assistant Magistracy to the Viceroyalty. Lord Mayo, who succeeded him, created an Agricultural Department and introduced the system of Provincial Finance, thus fostering the impulse to local self-government. He also laid the foundation for the reform of the salt duties, thereby enabling his successors to abolish the inter-provincial customs lines. Unhappily his vast schemes for the development of the country by extending communications of every kind were not carried out to the full by him, for he was murdered in the convict settlement of the Andaman Islands, in 1872. Lord Northbrook (Viceroy 1872-6) had to exercise his abilities chiefly in the province of finance. A severe famine which threatened Lower Bengal in 1874 was successfully warded off by the organization of State relief and the importation of rice from Burma. The following year was notable for the deposition of the Gaikwar of Baroda for misgovernment, and for the tour through India of the Prince of Wales (the late King Edward VII). The visit of the Duke of Edinburgh to India when Lord Mayo was Viceroy had given great pleasure to those with whom he had come in touch, and had established a kind of personal link between India and the Crown. The Prince of Wales' tour aroused unprecedented enthusiasm for and loyalty to the British Raj, and further encouragement was given to the growth of this spirit when, in a durbar of great magnificence held on January 1st, 1877, on the famous Ridge at Delhi, Queen Victoria was proclaimed Empress of India. The Viceroy of that time, Lord Lytton, had, however, to deal with a situation of unusual difficulty. Two successive years of drought produced, in 1877-78, the worst famine India had known. The most strenuous exertions were made to mitigate its effects, and eight crores of rupees were spent in importing grain; but the loss of life was estimated at 5½ millions. At this time also Afghan affairs once more became prominent.

Second Afghan War.

The Amir, Sher Ali, was found to be intriguing with Russia and that fact, coupled with his repulse of a British mission led to the second Afghan War. The British forces advanced by three routes—the Khyber, the Kurram, and the Bolan—and gained all the important vantage points of Eastern Afghanistan. Sher Ali fled and a treaty was made with his son Yakub Khan, which was promptly broken by the murder of Sir Louis Cavagnari, who had been sent as English envoy to Kabul. Further operations were thus necessary, and Sir F. (now Lord) Roberts advanced on the capital and defeated the Afghans at Charasia. A rising of the tribes followed, in spite of Sir D. Stewart's victory at Ahmed Kheyl and his advance from Kabul to Kandahar. A pretender, Sirdar Ayub Khan, from Herat prevented the establishment of peace, defeated Gen. Burrows' brigade at Maiwand, and invested Kandahar. He was routed in turn by Sir F. Roberts who made a brilliant march from Kabul to Kandahar. After the British withdrawal fighting continued between Ayub Khan and Abdur Rahman, but the latter was left undisputed Amir of Afghanistan until his death in 1901.

In the meantime Lord Lytton had resigned (1880) and Lord Ripon was appointed Viceroy by the new Liberal Government. Lord Ripon's administration is memorable for the freedom given to the Press by the repeal of the Vernacular Press Act, for his scheme of local self-government which developed municipal institutions, and for the attempt to extend the jurisdiction of the criminal courts in the Districts over European British subjects, independently of the race or nationality of the presiding judge. This attempt, which created a feeling among Europeans in India of great hostility to the Viceroy, ended in a compromise in 1884. Other reforms were the re-establishment of the Department of Revenue and Agriculture, the appointment of an Education Commission with a view to the spread of popular instruction on a broader basis, and the abolition by the Finance Minister (Sir Evelyn Baring, now Lord Cromer) of a number of customs duties. Lord Dufferin, who succeeded Lord Ripon in 1884, had to give his attention more to external than internal affairs: one of his first acts was to hold a durbat at Rawalpindi for the reception of the Amir of Afghanistan which resulted in the strengthening of British relations with that ruler. In 1885 a third Burmese war became necessary owing to the truculent attitude of King Thibaw and his intrigues with foreign Powers. The expedition, under General Prendergast, occupied Mandalay without difficulty and King Thibaw was exiled to Ratnagiri, where he died on 16th December 1916. His dominions of Upper Burma were annexed to British India on the 1st of January, 1886.

The Russian Menace.

Of greater importance at the time were the measures taken to meet a possible, and as it then appeared a probable, attack on India by Russia. These preparations, which cost over two million sterling, were hurried on because of a collision which occurred between Russian and Afghan troops at Penjdeh, during the delimitation of the Afghan frontier

towards Central Asia, and which seemed likely to lead to a declaration of war by Great Britain. War was averted, but the Penjdeh incident had called attention to a menace that was to be felt for nearly a generation more; it had also served to elicit from the Princes of India an unanimous offer of troops and money in case of need. That offer bore fruit under the next Viceroy, Lord Lansdowne, when the present system of Imperial Service Troops was organised. Under Lord Lansdowne's rule also the defences of the North-Western Frontier were strengthened, on the advice of Sir Frederick (now Earl) Roberts, who was then Commander-in-Chief in India. Another form of precautionary measure against the continued aggression of Russia was taken by raising the annual subsidy paid by the Indian Government to the Amir from eight to twelve lakhs.

On the North-Eastern Frontier there occurred (1891) in the small State of Manipur a revolution against the Raja that necessitated an inquiry on the spot by Mr. Quinton, the Chief Commissioner of Assam. Mr. Quinton, the commander of his escort, and others, were treacherously murdered in a conference and the escort ignominiously retreated. This disgrace to British arms led to several attacks on frontier outposts which were brilliantly defeated. Manipur was occupied by British troops and the government of the State was reorganised under a Political Agent. Lord Lansdowne's term of office was distinguished by several other events, such as the passing of the Parliamentary Act (Lord Cross's Act, 1892), which increased the size of the Legislative Councils as well as the number of non-officials in them: legislation aimed at social and domestic reform among the Hindus: and the closing of the Indian Mints to the free coinage of silver (1893). In Burma great progress was made, under Sir Alexander Mackenzie, as Chief Commissioner: comparative order was established, and large schemes for the construction of railways, roads, and irrigation works were put in hand. (The Province was made a Lieutenant-Governorship in 1897).

Frontier Campaigns.

Lord Elgin, who succeeded Lord Lansdowne in 1894, was confronted at the outset with a deficit of Rs. 2½ crores, due to the fall in exchange. (In 1895 the rupee fell as low as 1s. 1d.) To meet this the old five per cent. import duties were reimposed on a number of commodities, but not on cotton goods: and within the year the duty was extended to piece-goods, but not to yarn. The reorganisation of the Army, which involved the abolition of the old system of Presidency Armies, had hardly been carried out when a number of risings occurred along the North-West Frontier. In 1895 the British Agent in Chitral—which had come under British influence two years previously when Sir H. M. Durand had demarcated the southern and eastern boundaries of Afghanistan—was besieged and had to be rescued by an expeditionary force. Two years later the Wazirs, Swatis, and Mohmands attacked the British positions in Malakand, and the Afridis closed the Khyber Pass. Peace was only established after a prolonged campaign (the Tirah campaign) in which 40,000 troops were employed, and over 1,000 officers

and men had been lost. This was in itself a heavy burden on the finances of India, which was increased by the serious and widespread famine of 1896-97 and by the appearance in India of bubonic plague. The methods taken to prevent the spread of that disease led, in Bombay, to rioting, and elsewhere to the appearance in the vernacular press of seditious articles which made it necessary to make more stringent the law dealing with such writings.

Lord Curzon's Viceroyalty.

With famine and plague Lord Curzon also, who succeeded Lord Elgin in 1899, had to deal. In 1901 the cycle of bad harvests came to an end; but plague increased, and in 1904 deaths from it were returned at over one million. Of the many problems to which Lord Curzon directed his attention, only a few can be mentioned here: some indeed claim that his greatest work in India was not to be found in any one department but was in fact the general gearing up of the administration which he achieved by his unceasing energy and personal example of strenuous work. He had at once to turn his attention to the North-West Frontier. The British garrisons beyond our boundary were gradually withdrawn and replaced by tribal levies, and British forces were concentrated in British territory behind them as a support. An attempt was made to check the arms traffic and work on strategic railways was pushed forward. The fact that in seven years he only spent a quarter of a million upon repressive measures and only found it necessary to institute one blockade (against the Mahsud Waziris) is the justification of this policy of compromise between the Lawrence and Forward schools of thought. In 1901 the trans-Indus districts of the Punjab were separated from that Province, and together with the political charges of the Malakand, the Khyber, Kurram, Tochi, and Wana were formed into the new North-West Frontier Province, under a Chief Commissioner directly responsible to the Government of India. That year also witnessed the death of Abdur Rahman, the Amir of Afghanistan, and the establishment of an understanding with his successor Habibullah. In 1904 the attitude of the Dalai Lama of Tibet being pro-Russian and anti-British, it became necessary to send an expedition to Lhasa under Colonel (Sir Francis) Younghusband. The Dalai Lama abdicated and a treaty was concluded with his successor.

Lord Curzon as Viceroy.

In his first year of office Lord Curzon passed the Act which, in accordance with the recommendations of the Fowler Commission, practically fixed the value of the rupee at 1s. 4d., and in 1900 a Gold Reserve fund was created. The educational reforms that marked this Viceroyalty are dealt with elsewhere: chief among them was the Act of 1904 reorganising the governing bodies of Indian Universities. Under the head of agrarian reform must be mentioned the Punjab Land Alienation Act, designed to free the cultivators of the soil from the clutches of money-lenders, and the institution of Agricultural banks. The efficiency of the Army was increased (Lord Kitchener was Commander-in-Chief) by the re-armament

of the Indian Army, the strengthening of the artillery, and the reorganisation of the transport service. In his relations with the Feudatory Chiefs, Lord Curzon emphasized their position as partners in administration, and he founded the Imperial Cadet Corps to give a military education to the sons of ruling and aristocratic families. In 1902 the British Government obtained from the Nizam a perpetual lease of the Assigned Districts of Berar in return for an annual payment of 25 lakhs. The accession of King Edward VII was proclaimed in a splendid Durbar on January 1, 1903. In 1904 Lord Curzon returned to England for a few months but was re-appointed to a second term of office, Lord Amthill, Governor of Madras, having acted as Viceroy during his absence. The chief act of this second term was the partition of Bengal and the creation of a new Province of Eastern Bengal and Assam—a reform, designed to remove the systematic neglect of the trans-Gangetic areas of Bengal, which evoked bitter and prolonged criticism. In 1905 Lord Curzon resigned, being unable to accept the proposals of Lord Kitchener for the re-adjustment of relations between the Army headquarters and the Military Department of the Government, and being unable to obtain the support of the Home Government. Lord Curzon was succeeded by Lord Minto, the grandson of a former Governor-General. It was a stormy heritage to which Lord Minto succeeded, for the unrest which had long been noticed developed in one direction into open sedition. The occasion of the outburst in Bengal was the partition of that province. The causes of the flood of seditious writings and speeches, of the many attempts at assassination, and of the boycott of British goods are less easily definable. The mainspring of the unrest was “a deep-rooted antagonism to all the principles upon which Western society, especially in a democratic country like England, has been built up.”

Outside Bengal attempts to quell the disaffection by the ordinary law were fairly successful. But scarcely any province was free from disorder of some kind and, though recourse was had to the deportation of persons without reason assigned under an Act of 1818, special Acts had to be passed to meet the situation, viz.:—an Explosives Act, a Prevention of Seditious Meetings Act, and a Criminal Law Amendment Act which provides for a magisterial inquiry in private and a trial before three judges of the High Court without a jury. Concurrently with these legislative measures steps were taken to extend representative institutions. In 1907 a Hindu and a Mahomedan were appointed to the Secretary of State's Council, and in 1909 a Hindu was appointed for the first time to the Viceroy's Council. The Indian Councils Act of 1909 carried this policy farther by reconstituting the legislative councils and conferring upon them wider powers of discussion. The executive councils of Madras and Bombay were enlarged by the addition of an Indian member.

As regards foreign policy, Lord Minto's Viceroyalty was distinguished by the conclusion (1907) between Great Britain and Russia of an agreement on questions likely to disturb

the friendly relations of the two countries in Asia generally, and in Persia, Afghanistan and Tibet in particular. Two expeditions had to be undertaken on the North-West frontier, against the Zakka Khels and the Mohmands; and ships of the East Indies Squadron were frequently engaged off Maskat and in the Persian Gulf in operations designed to check the traffic in arms through Persia and Mekran to the frontier of India.

Visit of the King and Queen.

Sir Charles (Lord) Hardinge was appointed to succeed Lord Minto in 1910. His first year in India was marked by the visit to India of the King Emperor and the Queen, who arrived at Bombay on December 2, 1911. From there they proceeded to Delhi where, in the most magnificent durbar ever held in India, the coronation was proclaimed and various boons, including an annual grant of 50 lakhs for popular education, were announced. At the same ceremony His Majesty announced the transfer of the capital of India from Calcutta to Delhi; the reunion of the two Bengals under a Governor-in-Council; the formation of a new Lieutenant Governorship for Behar, Chota Nagpur and Orissa and the restoration of Assam to the charge of a Chief Commissioner.

In August, 1913, the demolition of a lavatory attached to a mosque in Cawnpore was made the occasion of an agitation among Indian Mahomedans and a riot in Cawnpore led to heavy loss of life. Of those present at the riot, 106 were put on trial but subsequently released by the Viceroy before the case reached the Sessions, and His Excellency was able to settle the mosque difficulty by a compromise that was acceptable to the local and other Mahomedans.

Still more serious trouble occurred in September, 1914, when a riot at Budge-Budge among a number of Sikh emigrants returned from Canada gave a foretaste of the revolutionary plans entertained by those men. The sequel, revealed in two conspiracy trials at Lahore, showed that the "Ghadr" conspiracy was widespread and had been consistently encouraged by Germany. That plot, however, had little influence on the general attitude of India to the war with Germany, and it was not the least of Lord Hardinge's services that he encouraged India to play a magnificent part in the war. To anticipate events in some degree, it may here be stated that India was at no time included in the theatre of war except when the Emden bombarded Madras, though shipping off Bombay was seriously affected by mines laid by the enemy.

Lord Chelmsford as Viceroy.

Lord Hardinge, whose great services had been rewarded with the Knighthood of the Garter, left India in 1916 and was succeeded by Lord Chelmsford, whose tenure of office was destined to be one of the most eventful in the modern history of India. The part played by India in the war was developed in every possible way. Not only was the Indian Army increased but the resources of the country were developed with the help of the Munitions Board and India assumed responsibility for 100 millions of the

war debt. The share of India in the Imperial burden of the war was emphasised in another and very significant way by her representation in the Imperial War Cabinet in London by His Highness the Maharaja of Bikaner and Sir S. P. (Lord) Sinha. On the Frontier, where there had been numerous though comparatively slight disturbances in 1914-15, a punitive expedition had to be undertaken against the Mahsuds.

In 1917 **Mr. Montagu**, who had succeeded Mr. Chamberlain as Secretary of State, carried out the latter's intention of visiting India. The visit took place at a time when the movement in favour of Home Rule for India had attained to the highest pitch yet witnessed and at a time when, as was shown by the increase of Indian representation on the Council of India and by the grant of commissions in the Army to Indians, the Government was anxious to meet the wishes of the people so far as it could without departing from its policy of avoiding controversial political issues during the war. The result of the visit was shown in the following year when a report was issued containing what is known as the joint scheme of reform evolved by the Secretary of State and the Viceroy. This scheme (of which details are given elsewhere in this volume) aimed at carrying into effect the announcement made in Parliament on August 20, 1917, that "the policy of His Majesty's Government, with which the Government of India are in complete accord, is that of the increasing association of Indians in every branch of the administration and the gradual development of self-governing institutions with a view to the progressive realisation of responsible government in India as an integral part of the British Empire." Shortly after this report there was issued a report by the Special Committee of Inquiry, over which Mr. Justice Rowlatt presided, into seditious crime in India. That report and the legislation which followed in consequence of it, together with the announcement of the proposed reform scheme, led to a renewal of political discussion and agitation which had to a great extent been in abeyance during the early years of the war.

Early in 1919 prolonged strikes in Bombay and elsewhere showed that India, though comparatively little affected by the economic results of the war, was confronted by industrial and economic problems which were none the less grave. The gravity of those problems was increased by the ravages of influenza which is supposed to have caused 6,000,000 deaths during the winter months of 1917-18. Disturbances broke out in April as a sequel to the passive resistance movement against the Rowlatt Act (the Satyagraha Movement) which produced a situation to which there has been no parallel since the Mutiny. For a detailed course of events the reader will refer to the calendar of events at the end of this book. It is sufficient here to state that in Ahmedabad, Viramgam, Delhi, Lahore, Amritsar, Gujranwalla and other places the crowd, by attacking life and property and by train wrecking and tearing up railway lines and telegraph wires, provoked a situation which could only be met by the proclamation of martial law and the enforcement of military measures for the protection of law

abiding subjects and for the suppression of disorder.

Exaggerated reports of those riots and of the effect of the Rowlatt Act may be presumed to have had some influence on the Amir of Afghanistan when he declared war and invaded British territory. Amir Habibullah Khan, who had been loyal to his treaty obligations throughout the war, was murdered in February and, after a brief occupation of the throne by his brother Nasrulla Khan, his son Amanulla had been declared Amir. The causes of the war and the terms of peace are described in full elsewhere in this volume. One effect of the peace was to give Afghanistan freedom in its external relations. A sequel to this war was the renewal of trouble along a great part of the North Western frontier where the tribesmen, who had at first appeared to be impressed by the British successes, took the offensive against our advance posts especially in southern Waziristan.

During the year political feeling ran high and opportunity was taken to foster a bond of union between Hindus and Mahomedans in connection with an agitation by the latter in favour of safeguarding the Khilafat and maintaining the temporal power of Turkey in its integrity. The publication of numerous despatches dealing with the Reform Scheme and the hearing of evidence by a Parliamentary Committee dealing with the subject helped to concentrate attention on the progress of the Scheme. India was represented at the Peace Conference by the Maharaja of Bikaner and by Lord Sinha, the first Indian peer and the first Indian Under Secretary.

The King's proclamation.

The Government of India Bill was passed in December and on the 24th of that month there was issued a proclamation by His Majesty the King-Emperor (of which the full text is given elsewhere in this book) in which he invited his subjects in India to consider the past and join him in his hopes for the future. In the course of the proclamation His Majesty said:—
“I rely on the leaders of the people, the Ministers of the future, to face responsibility and endure misrepresentation, to sacrifice much for the common interest of the State, remembering that true patriotism transcends party and communal boundaries; and, while retaining the confidence of the Legislatures, to co-operate with My Officers for the common good in sinking unessential differences and in maintaining the essential standards of a just and generous Government. Equally do I rely upon My Officers to respect their new colleagues and to work with them in harmony and kindness; to assist the people and their representatives in an orderly advance towards free institutions; and to find in these new tasks a fresh opportunity to fulfil as in the past their highest purpose of faithful service to My people.”

The proclamation went on to direct the Viceroy to exercise in the King's name “clemency to political offenders in the fullest measure which in his judgment is compatible with the public safety”, and announced that the Prince of Wales would in the winter of 1919-20 inaugurate on the King's behalf the new Chamber of Princes and the new constitutions in British India.

The Government of India.

The impulse which drove the British to India was not conquest but trade. The Government of India represents the slow evolution from conditions established to meet trading requirements. On September 24, 1599, a few years before the deaths of Queen Elizabeth and Akbar, the merchants of London formed an association for the purpose of establishing direct trade with the East and were granted a charter of incorporation. The Government of this Company in England was vested in a Governor with a General Court of Proprietors and a Court of Directors. The factories and affairs of the Company on the East and West Coast of India, and in Bengal, were administered at each of the principal settlements of Madras (Fort St. George), Bombay and Calcutta (Fort William), by a President or Governor and a Council consisting of the senior servants of the Company. The three "Presidencies" were independent of each other and subordinate only to the Directors in England.

Territorial Responsibility Assumed.

The collapse of Government in India consequent on the decay of Moghul power and the intrigues of the French on the East Coast forced the officers of the Company to assume territorial responsibility in spite of their own desires and the insistent orders of the Directors. Step by step the Company became first the dominant, then the paramount power in India. In these changed circumstances the system of government by mutually independent and unwieldy councils of the merchants at the Presidency towns gave rise to grave abuses. Parliament intervened, and under the Regulating Act of 1773, a Governor-General and four councillors were appointed to administer the Presidency of Fort William (Bengal), and the supremacy of that Presidency over Madras and Bombay was for the first time established. The subordinate Presidencies were forbidden to wage war or make treaties without the previous consent of the Governor-General of Bengal in Council, except in cases of imminent necessity. Pitt's Act of 1784, which established the Board of Control in England, vested the administration of each of the three Presidencies in a Governor and three councillors, including the Commander-in-Chief of the Presidency Army. The control of the Governor-General-in-Council was somewhat extended, as it was again by the Charter Act of 1793. Under the Charter Act of 1833 the Company was compelled to close its commercial business, and it became a political and administrative body holding its territories in trust for the Crown. The same Act vested the direction of the entire civil and military administration and sole power of legislation in the Governor-General-in-Council, and defined more clearly the nature and extent of the control to be extended over the subordinate governments. After the Mutiny, there was passed, in 1858, an Act transferring the Government of India from the Company to the Crown. This Act made no important change in the administration in India, but the Governor-General, as representing the Crown, became known as the Viceroy.

The Governor-General is the sole representative of the Crown in India; he is assisted by a Council, composed of high officials, each of whom is responsible for a special department of the administration.

Functions of Government.

The functions of the Government of India are perhaps the most extensive of any great administration in the world. It claims a share in the produce of the land and in the Punjab and Bombay it has restricted the alienation of land from agriculturists to non-agriculturists. It undertakes the management of landed estates where the proprietor is disqualified. In times of famine it undertakes relief work and other remedial measures on a great scale. It manages a vast forest property and is the principal manufacturer of salt and opium. It owns the bulk of the railways of the country, and directly manages a considerable portion of them; it has constructed and maintains most of the important irrigation works; it owns and manages the post and telegraph systems; it has the monopoly of the Note issue, and it alone can set the mints in motion. It lends money to municipalities, rural boards, and agriculturists and occasionally to owners of historic estates. It controls the sale of liquor and intoxicating drugs and has direct responsibilities in respect to police, education; medical and sanitary operations and ordinary public works of the most intimate character. The Government has also close relations with the Native States which collectively cover more than one-third of the whole area of India and comprise more than one-fifth of its population. The distribution of these great functions between the Government of India and the provincial administrations fluctuates; broadly speaking it may be said that the tendency of the day is to confine the Government of India to control and the Local Governments to administration.

Division of Responsibility.

The Government of India retains in its own hands all matters relating to foreign relations, defence, general taxation, currency, debt, tariffs, posts, telegraphs and railways. The ordinary internal administration—the assessment and collection of revenue, education, medical and sanitary arrangements, and irrigation, buildings and roads, fall within the purview of the Local Governments. In all these matters the Government of India exercises a general and constant control. It prescribes lines of general policy, and tests their application from the annual administration reports of the Local Authorities. It directly administers certain Imperial departments, such as Railways, Post Office, Telegraphs, the Survey of India and Geology; it employs a number of inspecting officers for those departments primarily left to Local Governments, including Agriculture, Irrigation, Forests, Medical and Archaeology. It receives, and when necessary modifies, the annual budgets of Local Governments; and every new appointment of importance, and every large addition even to minor establishments has to

receive its specific sanction. There also exists a wide field of appeal to the Government of India from officials or private individuals who may feel themselves aggrieved by the action of Local Governments; and outside the Presidencies of Madras, Bombay and Bengal, the approval of the Governor-General is necessary to the appointment of some of the most important officers of the provincial administration. The supervision of the principal Native States rests directly with the Governor-General in Council, but Local Governments have also responsibilities in this direction, where important States have historical association with them, and in the case of minor States.

Personnel of the Government.

The Governor-General and the "ordinary" members of his Council are appointed by the Crown. No limit of time is specified for their tenure of office, but custom has fixed it at five years. There are six "ordinary" members of Council, three of whom must, at the time of their appointment, have been at least ten years in the service of the Crown in India; one of the three remaining members must be a Barrister, the qualifications of the fifth and sixth are not prescribed by statute. The Indian civilians hold respectively the portfolios of Land Revenue and Agriculture, the Home, the Finance and the Education Departments. The Law Member has charge of the Legislative Department, and a member with English official experience has charge of the Commerce and Industry Department. The Viceroy acts as his own member in charge of Foreign affairs. Railways are administered by a Board of three members, whose chairman has the status of a Secretary, and are under the general control of the Commerce and Industry Department. The Commander-in-Chief may also be and in practice always is, an "extraordinary" member of the Council. He holds charge of the Army Department. The Governors of Madras, Bombay and Bengal become "extraordinary" members if the Council meets within their Presidencies. The Council may assemble at any place in India which the Governor-General appoints; in practice it meets only in Delhi and Simla.

Business Procedure.

In regard to his own Department each Member of Council is largely in the position of a Minister of State, and has the final

voice in ordinary departmental matters. But any question of special importance, and any matter in which it is proposed to over-rule the views of a Local Government, must ordinarily be referred to the Viceroy. Any matter originating in one department which also affects another must be referred to the latter, and in the event of the Departments not being able to agree, the case is referred to the Viceroy. The Members of Council meet periodically as a Cabinet—ordinarily once a week—to discuss questions which the Viceroy desires to put before them, or which a member who has been over-ruled by the Viceroy has asked to be referred to Council. If there is a difference of opinion in the Council the decision of the majority ordinarily prevails, but the Viceroy can over-rule a majority if he considers that the matter is of such grave importance as to justify such a step. Each departmental office is in the subordinate charge of a Secretary, whose position corresponds very much to that of a permanent Under-Secretary of State in the United Kingdom, but with these differences—that the Secretary is present at Council meetings; that he attends on the Viceroy, usually once a week, and discusses with him all matters of importance arising in his Department; that he has the right of bringing to the Viceroy's special notice any case in which he considers that the Viceroy's concurrence should be obtained to action proposed by the Departmental Member of Council; and that his tenure of office is usually limited to three years. The Secretaries have under them Deputy, Under and Assistant Secretaries, together with the ordinary clerical establishments. The Secretaries and Under-Secretaries are usually members of the Indian Civil Service. The Government of India has no Civil Service of its own as distinct from that of the Provincial Governments, and officers serving under the Government of India are borrowed from the Provinces.

The proposals of the Viceroy, Lord Chelmsford, and the Secretary of State for India, Mr. Montagu, for the constitutional development of India in the direction of responsible government are embodied in a separate section together with the report of the Parliamentary Joint Committee on the Government of India Bill, the text of that measure and the Royal Proclamation relating to it.

The description of the constitution and functions of the Government of India here, and of the Provincial Governments which follows, is based on the existing conditions. The

changes made by the Reform Scheme, which will not come into operation until 1921, are described in a separate section.

Government of India.

VICEROY AND GOVERNOR-GENERAL OF INDIA.

His Excellency the Right Hon. BARON CHELMSFORD, P.C., G.M.S.I., G.C.M.G., G.M.I.E., G.C.B.E.,
assumed charge of office, 5th April, 1916.

PERSONAL STAFF OF THE GOVERNOR-GENERAL.

Private Secretary, J. L. Maffey, C.I.E., I.C.S.

Military Secretary, Lieut.-Col. R. Verney, The Rifle Brigade.

Comptroller of the Household, Major J. Mackenzie, C.I.E., 35th Sikhs.

Asst. Private Secretary, H. R. Lynch-Blosse, I.C.S.

Aides-de-Camp, Captain J.A. Denny, Grenadier Guards; Major R.D. Alexander, 1/3rd Gurkha Rifles; Lt. C.M.G. Gordon-Ives; Lt.-Hon. D. E. F. O'Brien; Mohamad Akbar Ali Khan, Risaldar-Major, Sardar Bahadur, 7th Haryana Lancers.

Honorary Aides-de-Camp, Lieut.-Col. Pugh, 3rd Calcutta Light Horse; Lieut.-Col. A. M. Clark, 2-36th B. N. Rly. Battalion; Lieut.-Col. G. H. Evans, 3rd Rangoon P. D. Garrison Artillery; Commodore Lumsden, C.V.O., C.I.E., R.N.; Lieut.-Col. H. H. G. Mitchell, O.B.E., 2nd Madras Garrison Artillery;

Lieut.-Col. W. T. Wright, 3rd Punjab Rifles; Lieut.-Col. E. A. Constable, 1st Calcutta Port Defence Gar. Artillery; Lieut.-Col. L. A. Grimston, 6th Assam, V.L.H.; Lieut.-Col. Gavin-Jones, 7th U.P. Horse; Major Llewellyn, 1st Bihar Light Horse; Lieut.-Col. P. R. Cadell, C.I.E., V.D. 15th Bombay Battalion; Rana Jodha Jung Bahadur, 3rd Brahmins; Hon. Captain Raja Sir Hari Singh; Colonel Ganpat Rao Raghunath Rajwade and Hon. Major Nawabzada Haji Hafiz Obeidullah Khan of Bhopal.

Risaldar Major Sardar Bahadur Wali Muhammad; Risaldar Major Abdul Aziz; Subadar Major Sardar Bahadur Madhi Singh Rana; Risaldar Major Sardar Bahadur Abdul Karim Khan; Subadar Major Mit Singh; Karm Singh, Risaldar Major Bahadur; and Risaldar Major Sardar Bahadur Mahi-uddin Khan.

Surgeon, Lieut.-Col. H. Austen-Smith, M.B., I.M.S.

Commandant of Body Guard, Capt. A. Brooke 18th Lancers.

Ordinary Members—

COUNCIL.

Sir G. S. Barnes, K.C.B. Took his seat, 6th April, 1916.

Sir William Henry Hoare Vincent. Took his seat, 21st April, 1917.

W. M. Hailey, C.S.I., C.I.E., (*Finance*).

Sir C. H. A. Hill, K.C.S.I., C.I.E. Took his seat, 5th July, 1915.

Khan Bahadur Mian Muhammad Shaif, C.I.E. Took his seat 28th July, 1919.

Sir G. R. Lowndes, K.C.S.I. Took his seat, 20th December, 1915 (*Law*).

Extraordinary Member—

H. E. Gen. Sir Charles Carmichael Monro, G.C.M.G., K.C.B., Commander-in-Chief in India.

SECRETARIAT.

REVENUE AND AGRICULTURE DEPARTMENT.

Secretary, R. A. Mant.

Under-Secretary, G. C. Plowden, I.C.S.

Wheat Commissioner for India, C. W. Jacob, I.C.S.

Registrar, W. A. Threlfall.

Superintendents, A. B. E. Thomson, C. H. Martin, H. H. Lincoln and T. McDonnell.

FINANCE DEPARTMENT.

Ordinary Branch.

Secretary, M. M. Gubbay, C.S.I.

Deputy Secretary, H. K. Briscoe, I.C.S.

Under Secretary, E. N. Blandy, I.C.S.

Assistant Secretary, A. V. V. Aiyar, B.A.

Registrar, E. W. Baker, I.S.O.

Superintendents, G. W. C. Bradey, G. J. Piper, C. N. Chakrabarty, V. K. Menon, W. M. Mather, Shah Muhammad and A. R. Rebello.

Comptroller and Auditor-General, M. F. Gauntlett, C.B.E., C.I.E., I.C.S.

Controller of Currency, E. M. H. Cooke, C.I.E.

Deputy Controller of Currency, C. W. C. Carson.

Military Finance Branch.

Financial Adviser, Hon. Sir G. B. H. Fell C.S.I., C.I.E., I.C.S.

Military Accountant-General and ex-officio Deputy Financial Adviser, Col. B. W. Marlow, C.S.I., C.I.E., I.A., B. N. Mitra, O.B.E., C.I.E. (*Officiating*).

Deputy Financial Adviser, Lt.-Col. E. B. Peacock, I.A.

Additional Deputy Financial Adviser, W. D. Gray, O.B.E.

Assistant Financial Adviser, H. S. Cumber.

Registrar, W. C. Gleeson.

Superintendents, G. E. Hodges, G. M. Turner, A. W. Schönemann and F. J. Woolmer.

FOREIGN DEPARTMENT.

Political Secretary, Sir J. B. Wood, K.C.I.E.

Foreign Secretary, H. R. C. Dobbs, C.S.I., C.I.E.

Deputy Secretary (Foreign), A. N. L. Cater.

Deputy Secretary (Political), Major G. D. Ogilvie.

Under Secretary, K. S. Fitze.

Assistant Secretary, Major W. G. Neale.

Attache, Khan Bahadur Ghulam Murtaza Khan.

Registrar, T. G. B. Waugh.

Offg. Inspector-General, Imperial Service Troops, Brigadier-General A. W. Pennington, M.V.O.

Superintendents, D. A. Clarke, E. Betram Higgs, C. O., H. Teeling, F. P. Buckner, J. W. S. Inglis, C. W. Kirkpatrick, R. C. Albert, F. S. Hasley and K. D. Fink.

HOME DEPARTMENT.

Secretary, Hon. Sir James du Boulay, K.C.I.E., C.S.I. on deputation. Sir W. S. Morris (*sub pro-tem.*)

Deputy Secretary, H. D. Craik, I.C.S.

Under Secretary, A. Macleod, I.C.S.

Registrar, G. F. Winn.

Superintendents, A. S. Lawrence, H. C. Marsden, P. K. Basu, Bijay Krishna Banerji, Raman Mohan Ganguli, U. C. Stuart, and Rai Abinas Chandra Koar Bahadur, I.S.O.

EDUCATION DEPARTMENT.

Secretary, H. Sharp, C.S.I., C.I.E.

Educational Commissioner with the Government of India, H. Sharp, C.S.I., C.I.E.

Assistant Secretary, J. M. Mitra, Rai Bahadur.

Superintendents, L. M. Roy, G. E. Jackson, A. H. Bartlett, and P. N. Sen.

Registrar, Rai Sahib M. N. Chakrabarti.

Curator, Bureau of Education, G. R. Kaye, F.R.A.S.

LEGISLATIVE DEPARTMENT.

Secretary, A. P. Muddiman, C.I.E.; *Officiating Secretary*, H. Moncrieff Smith.

Legal Asst., S. C. Gupta.

Registrar, C. H. F. Pereira.

Superintendents, A. L. Banerji, D. D. Baird and E. H. Brandon.

ARMY DEPARTMENT.

Secretary, Major-General A. H. Bingley.

Deputy Secretary, *sub. pro tem.*, Lt.-Col. A. H. O. Spence.

Assist. Secretaries, Major G. D. Ogilvie, Major A. W. Chitty and A. A. Whelan.

Registrar, Mr. R. Tharle Hughes.

Superintendents, W. C. Debenham, A. B. Kunning, P. P. Hypher, Rai Sahib S. C. Biswas and J. C. R. Leslie.

PUBLIC WORKS DEPARTMENT.

Secretary, The Hon. F. C. Rose.

Deputy Secretary, A. J. R. Hope.

Under Secretary, D. G. Harris.

Assistant Secretary, W. G. Dollman.

Superintendents, W. I. Tilden, H. M. Marchant, L. Bloemink and W. R. Chambers.

Inspr.-Genl. of Irrign., T. R. J. Ward, C.I.E., M.V.O.

Consgr. Acht., J. Begg, F.R.I.B.A.

Elect. Adviser, J. W. Meares, F.R.A.S., M.I.C.E., M.I.E.E.

COMMERCE AND INDUSTRY DEPARTMENT

Secretary, A. H. Ley, C.I.E., I.C.S.

Deputy Secretary, G. L. Corbett, I.C.S.

Under Secretaries, C. G. Freke, I.C.S. and E. C. Anson, I.C.S.

Actuary, H. G. W. Meikle.

Registrar, E. P. Jones.

Superintendents, B. B. Banarji, S. M. Banarji, C. H. Baldrey, Fateh Din, D. O'Sullivan and K. D. Banerji. *Officiating*, A. K. Sarkar.

RAILWAY BOARD.

President, The Hon. Sir Arthur R. Anderson, K.C.I.E., O.B.E. *Members*, F. W. Hanson, C.I.E. and F. D. Couchman, M.I.C.E.

Secretary, R. McLean.

Chief Engineer, F. G. Royal-Dawson.

POST OFFICE & TELEGRAPH DEPT.

Director-General of Posts & Telegraphs, Hon. Mr. G. R. Clarke, O.B.E.

NORTHERN INDIA SALT REVENUE.

Commissioner, J. F. Connolly, I.C.S. (J. C. Ferguson, Actg.)

INDO-EUROPEAN TELEGRAPH DEPARTMENT.

Persian Gulf and Persian Sections.

Directors, E. E. Gunter, H. W. Smith, C.I.E.; W. King-Wood, C.I.E. (*Offg.*), Commander of Cable Steamer "Patrick Stewart," F. W. Townsend.

SURVEY DEPARTMENT.

Surveyor-General of India, Col. C. H. D. Ryder, C.I.E., D.S.O.

GEOLOGICAL SURVEY.

Director, H. H. Hayden, C.I.E., B.A., F.G.S.
Superintendents, E. Vredenburg, B.Sc., F.G.S.;
 L. L. Fermor, D.Sc., F.G.S.; E. H. Pascoe, M.A., D.Sc., F.G.S.
Chemist, W. A. K. Christie, B.Sc., Ph.D.

BOTANICAL SURVEY.

Director, Lt.-Col. A. T. Gage, M.B. I.M.S.; *Economic Botanist*, H. G. Carter, M.B.A.B.; *Economic Botanist*, Madras, F. R. Parnell; *Economic Botanist*, Bombay, W. Burns, B.Sc.; *Economic Botanist*, United Provinces, H. M. Leake, M.A., F.L.S.

ARCHÆOLOGICAL SURVEY.

Director-General of Archæology, Sir J. H. Marshall, M.A., C.I.E.; (on leave); D. B. Spooner (officiating); *Superintendent*, Western Circle, D. R. Bhandarkar, M.A.; *Superintendent*, Southern Circle, A. H. Longhurst; *Superintendent*, Eastern Circle, Daya Ram Sahni; *Superintendent*, Northern Circle, J. A. Page; *Superintendent*, Burma, Taw Sein Ko, C.I.E., I.S.O.; *Superintendent*, Frontier Circle, Khan Saheb Mian Wasi-ud-din.

MISCELLANEOUS APPOINTMENTS.

Director-General, Indian Medical Service, Col. Edwards, I.M.S.

Sanitary Commissioner with the Government of India, Lieut.-Col. F. H. G. Hutchinson, I. M. & S.

Deputy Director-General, Indian Medical Service, Lt.-Col. R. A. Needham, C.I.E., I.M.S.

Asstt. D. G. I. M. S., (Stores) Lt.-Col. H. Ross, I.M.S., O.B.E.

Asstt. Director-General, Indian Medical Service (Sany.), Major J. A. Cruickshank.

Director, Central Research Institute, Kasauli, Lt.-Col. W. F. Harvey, M.A., M.B., D.P.H., I.M.S.

Assistants to Director, Central Research Institute, Kasauli, Major F. W. Cragg, Major H. C. Brown, Dr. Krishna Swami Iyengar, and G. Mackey.

Director, King Institute of Preventive Medicine, Major J. M. D. Cunningham, I.M.S.

Asst. Director, King Institute of Preventive Medicine, Major W. S. Patton, M.B., I.M.S.

Director-General of Indian Observatories, G. T. Walker, C.S.I., M.A., D.Sc., F.R.S.

Imperial Meteorologists, G. C. Simpson, D.Sc.; C. W. B. Normand; Hemraj, Rai Bahadur.

Director, Kodaikanal and Madras Observatories, J. Evershed.

Director, Bombay and Alibagh Observatories, Bombay, N. A. F. Moos.

Director, Aerological Observatory, Agra, J. H. Field, M.A.

Secretary, Board of Examiners, Major C. L. Peart, I.A. (on Military duty); O. F. Jenkins, I.C.S. (Officiating).

Officer in Charge of the Records of the Government of India, A. F. Scholfield, M.A. (offg.)

Librarian, Imperial Library, Calcutta, J. A. Chapman.

Agricultural Adviser and Director of the Agricultural Research Institute, Pusa, J. Mc Kenna.

Director, Zoological Survey of India, Indian Museum, N. Annandale, B.A., D.Sc.

Curator, Industrial Section of Indian Museum, D. Hooper, F.C.S., F.L.S.

Chief Inspector of Mines, G. F. Adams.

Controller of Printing, Stationery and Stamps, M. J. Cogswell.

Superintendent of Government Printing, J. J. Meikle.

Chief Inspector of Explosives, Lieut.-Col. C. A. Muspratt-Williams, R.A.

Administrator-General of Bengal, H. T. Hyde.
Director, Criminal Intelligence, Sir C. R. Cleveland, K.C.I.E.

Director-General of Commercial Intelligence, H. A. F. Lindsay, I.C.S.

Director of Statistics, G. F. Shirras.

Customs and Excise Chemist, R. L. Jenks.

Controller of Patents and Designs, H. G. Graves.

GOVERNORS-GENERAL OF FORT WILLIAM IN BENGAL.

Name.	Assumed charge of office.
Warren Hastings	20 Oct. 1774
Sir John Macpherson, Bart. ..	8 Feb. 1785
Earl Cornwallis, K.G. (a) ..	12 Sep. 1786
Sir John Shore, Bart. (b) ..	28 Oct. 1793
Lieut.-General the Hon. Sir Alured Clarke, K.C.B. (offg.) ..	17 March 1798
The Earl of Mornington, P.C. (c) ..	18 May 1798
The Marquis Cornwallis, K. G. (2nd time)	30 July 1805
Sir George H. Barlow, Bart. ..	10 Oct. 1805
Lord Minto, P.C. (d)	31 July 1807
The Earl of Moira, K.G., P.C. (e) ..	4 Oct. 1813
John Adam (offg.)	13 Jan. 1823
Lord Amherst, P.C. (f)	1 Aug. 1823
William Butterworth Bayley (offg.) ..	13 Mar. 1828
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C.	4 July 1828
(a) Created Marquess Cornwallis, ..	15 Aug. 1792
(b) Afterwards (by creation) Baron Teignmouth. ..	
(c) Created Marquess Wellesley, ..	2 Dec., 1799
(d) Created Earl of Minto, ..	24 Feb., 1813.
(e) Created Marquess of Hastings, ..	2 Dec., 1816
(f) Created Earl Amherst, ..	2 Dec., 1826.

GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Lord William Cavendish Bentinck, G.C.B., G.C.H., P.C. ..	14 Nov. 1834
Sir Charles Metcalfe, Bart. (a) (offg.) ..	20 March 1835
Lord Auckland, G.C.B., P.C. (b)	4 March 1836
Lord Ellenborough, P.C. (c) ..	28 Feb. 1842
William Wilberforce Bird (offg.)	15 June 1844
The Right Hon. Sir Henry Hardinge, G.C.B. (d) ..	23 July 1844
The Earl of Dalhousie, P.C. (e) ..	12 Jan. 1848
Viscount Canning, P.C. (f) ..	29 Feb. 1856
(a) Afterwards (by creation) Baron Metcalfe.	
(b) Created Earl of Auckland, 21 Dec., 1839.	
(c) Afterwards (by creation) Earl of Ellenborough.	
(d) Created Viscount Hardinge, 2 May, 1846.	
(e) Created Marquess of Dalhousie, 25 Aug. 1849.	
(f) Afterwards (by creation) Earl Canning.	

NOTE.—The Governor-General ceased to be the direct Head of the Bengal Government from the 1st May, 1854, when the first Lieutenant-Governor assumed office. On 1st April, 1912, Bengal was placed under a separate Governor and the appointment of Lieutenant-Governor was abolished.

VICEROYS AND GOVERNORS-GENERAL OF INDIA.

Name.	Assumed charge of office.
Viscount Canning, P.C. (a) ..	1 Nov. 1858
The Earl of Elgin and Kincardine, K.T., G.C.B., P.C. ..	12 March 1862
Major-General Sir Robert Napier, K.C.B. (b) (offg.) ..	21 Nov. 1863
Colonel Sir William T. Denison, K.C.B. (offg.) ..	2 Dec. 1863

The Right Hon. Sir John Lawrence, Bart., G.C.B., K.C.S.I. (c) ..	12 Jan. 1864
The Earl of Mayo, K.P. ..	12 Jan. 1869
John Strachey (d) (offg.) ..	9 Feb. 1872
Lord Napier of Merchistoun, K. T. (e) (offg.) ..	23 Feb. 1872
Lord Northbrook, P.C. (f) ..	3 May 1872
Lord Lytton, G.C.B. (g) ..	12 Apl. 1876
The Marquess of Ripon, K.G., P.C.	8 June 1880
The Earl of Dufferin, K.P., G.C.B., G.C.M.G., P.C. (h) ..	13 Dec. 1884
The Marquess of Lansdowne, G. C. M. G. ..	10 Dec. 1888
The Earl of Elgin and Kincardine, P. C. ..	27 Jan. 1894
Baron Curzon of Kedleston, P.C.	6 Jan. 1899
Baron Amphilh (offg.) ..	30 Apl. 1904
Baron Curzon of Kedleston, P.C. (t) 13 Dec.	1904
The Earl of Minto, K. G., P. C., G. C. M. G. ..	18 Nov. 1905
Baron Hardinge of Penshurst, P.C., G.C.B., G.C.M.G., G.C.V.O., I.S.O. (j) 23 Nov.	1910
Lord Chelmsford ..	Apl. 1916
(a) Created Earl Canning, 21 May 1859.	
(b) Afterwards (by creation) Baron Napier (of Magdala).	
(c) Afterwards (by creation) Baron Lawrence.	
(d) Afterwards Sir John Strachey, G.C.S.I., C.I.E.	
(e) Afterwards (by creation) Baron Napier of Ettrick.	
(f) Afterwards (by creation) Earl of Northbrook.	
(g) Created Earl of Lytton, 28 April, 1880.	
(h) Created Marquis of Dufferin and Ava; 12 Nov. 1888.	
(i) Created an Earl ..	June 1911
(j) During tenure of office, the Viceroy is Grand Master and First and Principal Knight of the two Indian Orders (G.M.S.I., and G.M.I.E.). On quitting office, he becomes G.C.S.I. and G.C.I.E.; with the date of his assumption of the Viceroyalty.	

The Imperial Legislative Council.

The constitution of the Executive Council of the Government of India has been sketched; or the purposes of legislation, and to bring the administration into close touch with public opinion, the Executive Council is expanded by additional members into a great legislative assembly. The first step was taken in 1861, when the Indian Councils Act provided that, for the better exercise of the power of making laws and regulations vested in the Governor-General-in-Council, he should nominate "Additional" members for the purposes of legislation only. The additional members were appointed for two years and joined the Council when it met for legislative purposes. The maximum number of members fixed by the Act was twelve, of whom not less than one half were to be non-officials (holding no office under the Government) and in practice most of the non-officials were natives of India. Similar legislative councils were constituted in some of the provinces, but the growth of these bodies will be considered when we come to deal with the provincial administrations.

The Act of 1892.

In 1892 important additions were made both to the constitution and the powers of the Legislative Council. The number of Additional members was raised to sixteen, and the representative principle was introduced. Whilst the method of appointment was, as before, nomination by the Governor-General, a certain number of nominations were made on the recommendation of specified persons, bodies and associations and in practice these recommendations were never refused. Of the sixteen Additional members, six were usually officials and ten non-officials. Four of the non-officials were nominated on the recommendation of the non-official members of the provincial Legislative Councils, the fifth was recommended by the Calcutta Chamber of Commerce, and the remaining five were chosen by the Governor-General, either with a special view to the legislative business to be transacted, or to secure the due representation of all classes. The Council was also empowered to discuss the budget and to ask questions on matters of public interest.

Morley-Minto Reforms.

The Imperial Legislative Council took its present shape under what is commonly called the Morley-Minto reform scheme of 1909, and was embodied in the Indian Councils Act of that year. Two principles run through this scheme (1) to secure the fair representation of all the varied interests in the country and (2) to give the Council a real influence in determining the character of the administration. The Imperial Legislative Council now consists of sixty Additional members, of whom thirty-five are nominated by the Governor-General and twenty-five are elected by specified electorates. Of the nominated members not more than twenty-eight may be officials, and three others who must not be officials must be nominated by the Muhamedans of the Punjab, the landholders of the Punjab, and the Indian commercial community respectively. The remaining four seats are at the Governor-

General's disposal to secure experts on special subjects or representatives of minor interests. Of the twenty-five elected members, eleven are selected by the non-official members of the provincial Legislative Councils, two by each of the four largest provinces and one by each of the three other provinces. A twelfth is elected by the District and Local Boards of the Central Provinces, as that administration has no legislative council. Six members are elected by electorates of landowners in six provinces, five by the Muhamedan community in each of the five provinces, and two by the Chambers of Commerce in Calcutta and Bombay. The Governor-General-in-Council has the exceptional power of excluding a candidate whose reputation and antecedents are such that his election would be contrary to the public interest. An oath, or affirmation of loyalty to the Crown is required of every member before he takes his seat. Members hold office for three years, and each triennium there is a general election for the Council.

Powers of the Council.

The additions to the non-legislative powers of the Council by the Act of 1909 were also substantial. The Council can exercise a material influence on the Budget. The Finance Member first presents the preliminary estimates with an explanatory memorandum. On a subsequent day he makes such further explanations as he thinks necessary. Members can thereupon move resolutions regarding any proposed alteration in taxation, any proposed loan, or any additional grant to Local Governments. When these resolutions are voted upon, the estimates are taken by groups, and resolutions may be moved on any heads of revenue or expenditure. Certain heads, as for instance, Customs and the Army, are excluded from discussion. The Finance Member takes these discussions into consideration, and then presents his final budget. He describes the changes made, and why any resolutions that have been passed have not been accepted. A general discussion of the budget then takes place, but no resolution may be moved, or vote taken. Government is not bound to act upon the resolution of the Council. This power is never likely to be used, because the Government has an official majority on that body. This official majority was specially prescribed by the Secretary of State, because as Parliament is, in the last resort, responsible for the good government of India, the British Government, through its mouthpiece, the Secretary of State, must have the means of imposing its will on the Government of India.

Apart from the Budget debates, members of Council now have the right to initiate the discussion of any question of public interest at any sitting of the Council by moving a resolution. The right of interpellation has also been expanded by the power of asking supplementary questions in order to elucidate a reply given to an original question. The President of the Council may disallow any question which, in his view, cannot be answered consistently with the public interests,

Control over Legislation.

The legislative powers of the Imperial Legislative Council are still regulated by the Act of 1861. Certain Acts of Parliament under which the Government of India is constituted cannot be touched and no law can be made affecting the authority of Parliament or allegiance to the Crown. With these exceptions the legislative powers of the Governor-General-in-Council over the whole of the British India are unrestricted. Measures affecting the public debt, or the revenues of India, the religion of any of His Majesty's subjects, the discipline or maintenance of the military or naval forces, and the relations of the Government with foreign states cannot be introduced by any member without the previous sanction of the Governor-General. Every Act requires the

Governor-General's assent. The assent of the Crown is not necessary to the validity of an Act, but the Crown can disallow any Act that has been passed.

Apart from these legislative powers the Governor-General-in-Council is authorised to make, without calling in the Additional Members, regulations having the force of law for the less advanced parts of the country, where a system of administration simpler than that in force elsewhere is desirable. In cases of emergency the Governor-General can, on his own authority and without reference to his Council, make Ordinances which have the force of law for six months.

All Members of the Imperial and Provincial Legislative Councils are entitled to the prefix "Hon'ble Mr." during their term of office.

A.—Elected Members.

(Not to be less than 27.)

Serial No.	Name.	Electorate.
1	The Hon. Rao Bahadur B. N. Sarma Garu..	Madras.
2	" Mr. Srinivasa Sastri	Do.
3	" Mr. V. J. Patel	Bombay.
4	" Sir Dinsha Eduljee Wacha, Kt. ..	Do.
5	" Mr. Surrendra Nath Banerjee ..	Bengal.
6	" Rai Sitanath Ray Bahadur ..	Do.
7	" Pandit Madan Mohan Malaviya ..	United Provinces.
8	" Dr. Tej Bahadur Sapru	Do.
9	" Sardar Bahadur Sardar Sundar Singh.	Punjab.
10	" Maung Bah Too, C.I.E., K.S.M. ..	Burma.
11	" Mr. Sachidananda Sinha ..	Bihar and Orissa.
12	" Mr. Kamini Kumar Chanda ..	Assam.
13	" Mr. Ganesh Shri Krishna Kharparde.	Central Provinces.
14	" Mr. K. V. Rangaswami Ayyangar.	Madras.
15	" Khan Bahadur Saiyad Allahando Shah.	Bombay.
16	" Maharaja Sir Manindra Chandra Nandi, K.C.I.E., of Kasimbazar.	Bengal.
17	" Raja Sir Rampal Singh, K.C.I.E.	United Provinces.
18	" Raja Rajendra Narayan Bhanja Deo, O.B.E.	Bihar and Orissa.
19	" Rai Sahib Seth Nathmal ..	Central Provinces.
20	" Mir Asad Ali, Khan Bahadur ..	Madras.
21	" Khan Bahadur Ebrahim Haroon Jaffar.	Bombay.
22	" Mr. Abdur Rahim	Bengal.
23	" Nawab Saiyed Nawab Ali Chaudhuri, C.I.E.	Do.
24	" Raja Sir Muhammad Ali Muhammad Khan, K.C.I.E.	United Provinces.
25	" Hajji Choudhuri Mohammad Ismail Khan.	Bihar and Orissa.
26	" Mr. E. Crum, O.B.E.	Chamber of Commerce, Bengal.
27	" Nigel F. Paton	Chamber of Commerce, Bombay.

B.—Nominated Members.

(Not to exceed 33.)

Serial No.	Name.	Province or body represented.
(a) OFFICIAL MEMBERS.		
1	The Hon. Mr. N. E. Marjoribanks, C.I.E. ..	Madras.
2	„ Mr. L. J. Mountford, O.B.E. ..	Bombay.
3	„ Mr. T. Emerson, C.I.E. ..	Bengal.
4	„ Mr. Hugh McPherson, C.S.I. ..	Bihar and Orissa.
5	„ Mr. L. C. Porter, C.S.I., C.I.E. ..	United Provinces.
6	„ Mr. J. P. Thompson, C.S.I. ..	Punjab.
7	„ Mr. W. A. Hertz, C.S.I. ..	Burma.
8	„ Mr. J. T. Marten ..	Central Provinces.
9	„ Mr. W. J. Reid, C.S.I. ..	Assam.
10	„ Vacant ..	N.-W. F. Provinces.
11	„ Mr. C. H. Kesteven ..	Government of India.
12	„ Mr. H. Sharp, C.S.I., C.I.E. ..	Do.
13	„ Mr. E. Burdon ..	Do.
14	„ Mr. A. P. Muddiman, C.I.E. ..	Do.
15	„ Mr. F. C. Rose, M.I.C.E. ..	Do.
16	„ Major-General Sir Alfred Bingley, K.C.I.E., C.B. ..	Do.
17	„ Major-General W. R. Edwards, C.B., C.M.G. ..	Do.
18	„ Mr. G. R. Clarke, O.B.E. ..	Do.
19	„ Lt.-Col. R. E. Holland C.I.E. ..	Do.
20	„ Sir William Marris, K.C.I.E. ..	Do.
21	„ Mr. A. H. Ley, C.I.E. ..	Do.
22	„ Sir Arthur Anderson, Kt., C.I.E., C.B.E. ..	Do.
23	„ Mr. H. Moncrieff Smith. ..	Do.
24	„ Mr. H. R. C. Dobbs, C.S.I., C.I.E. ..	Do.
25	„ Mr. W. M. Hailey, C.S.I., C.I.E. ..	Do.
26	„ Mr. W. F. Rice, C.S.I. ..	Do.
27	„ Mr. E. M. Cook. ..	Do.
28	„ Mr. J. Hullah. ..	Do.
(b) NON-OFFICIAL MEMBERS.		
1	The Hon. Sir Fazulbhoj Currimbhoj, Kt., O.B.E. ..	Indian Commercial Community.
2	„ Major Malik Sir Umar Hayat Khan (Punjab.) ..	Muhammadian Community, Punjab.
3	„ Sir Zulfiqar Ali Khan, Kt., C.S.I. (Punjab.) ..	Landholders, Punjab.
4	„ Sub-Major and Hon. Capt. Ajab Khan, Sardar Bahadur I.O.M. ..	.....
5	„ Sir Gangadhar Chitnavis, K.C.I.E. ..	.....

Present Constitution of the Council.

I.—The whole Council.

By the proviso to Regulation I for the Legislative Council of the Governor-General it is declared that it shall not be lawful for the Governor-General to nominate so many non-official persons that the majority of all the Members of the Council shall be non-officials.

Officials—	(a) Members of the Executive Council ..	7
	(b) The Lieutenant-Governor or Chief Commissioner of the Province (1) ..	1
	(c) Nominated Members ..	27
Total ..		35
Non-Officials (2)—	(a) Elected Members ..	27
	(b) Nominated Members ..	5
	Total ..	32
Official majority, exclusive of the Governor-General ..		5

II.—The Additional Members.

The Indian Councils Act, 1861, section 10, provides that not less than one-half of the Additional Members (exclusive of the Lieutenant-Governor or Chief Commissioner of the Province (1) in which the Council may for the time being be assembled) shall be non-officials.

(Present number of Additional Members	Officials (nominated) ..	26
	Non-officials (elected and nominated) ..	31
	Vacancies ..	3
	Total ..	60

(For work of Imperial Legislative Council, Session 1915-16, q. v.)

The Home Government.

The Home Government of India has represented for sixty years the gradual evolution of the governing board of the old East India Company. The affairs of the company were originally managed by the Court of Directors and the General Court of Proprietors. In 1784 Parliament established a Board of Control, with full power and authority to control and direct all operations and concerns relating to the civil and military government, and revenues of India. By degrees the number of the Board was reduced and its powers were exercised by the President, the lineal precursor of the Secretary of State for India. With modifications this system lasted until 1858, when the Mutiny, followed by the assumption of the Government of India by the Crown, demanded a complete change. Under the Act of 1858 (now merged in the consolidating measure passed in 1915) and amended the following year the Secretary of State is the constitutional adviser of the Crown on all matters relating to India. He inherits generally all the powers and duties which were formerly vested either in the Board of Control, or in the Company, the Directors and the Secret Committee in respect of the Government and revenues of India. He has the power of giving orders to every officer in India, including the Governor-General, and is in charge of all business relating to India which is transacted in the United Kingdom.

Secretary of State's Powers.

Of these wide powers and duties many rest on his personal responsibility; others can be performed only in consultation with his Council, and for some of these the concurrence of a majority of the members of his Council is required. The Secretary of State may act without consulting the Council in all matters where he is not expressly required by statute to act as "Secretary of State in Council." Appointments by the Crown are made on his advice. Every official communication proposed to be sent to India must be laid before Council, unless it falls under either of two reserved classes. One of these is "Secret communications" dealing chiefly with war and peace, relations with foreign Powers and Native States. The others are those which he may deem "urgent." No matter for which the concurrence of a majority of Council is necessary can be treated as either "secret" or "urgent." In ordinary business, for which the concurrence of a majority of Council is not required, the Secretary of State is not bound to follow the advice of the Council. These provisions reserve to the Secretary of State a wide discretionary power of interference with the Government of India which is exercised in accordance with the temperament of the Secretary of State for the time being. But in all matters of finance, the authority is that of the Secretary of State and the Council and is freely exercised.

The Council.

The Council of India consists of such number of members, not being less than ten or more than fourteen, as the Secretary of

State may from time to time determine. The members hold office for seven years, and this term may, for special reasons of public advantage, which must be laid before Parliament, be extended for five years more. Nine members must be persons who have served or resided in India for at least ten years, and who have not left India more than five years before their appointment. The object aimed at in the constitution of the Council is to give the Secretary of State, who has little knowledge of the details of the Indian administration, the help of a body of experts. In 1907, in connection with the policy of constitutional reform, two Indians, one Hindu and the other a Mahomedan, were appointed to vacancies in the Council. Ten years later Mr. Chamberlain raised the number to three—two Hindus and a Mahomedan. On the formation of the new Coalition Government in January 1918 Sir S. P. Sinha was raised to the peerage and appointed Under Secretary of State, being the first Indian to become a member of the Home Ministry.

The India Office.

Associated with the Secretary of State and the India Council is a secretariat known as the India Office, housed at Whitehall. Appointments to the establishment are made by the Secretary of State in Council, but "junior situations" must be filled in accordance with the general regulations governing admission to the Home Civil Service.

The whole cost of the India Office has been borne by the revenues of India, though the Home Government makes certain grants and remissions in lieu of a direct contribution amounting to £50,000 a year. The total net cost including pensions is about £250,000 per annum.

All these arrangements were in process of revision, when this Year Book was in preparation. The Government of India Bill, as introduced, provided that the salary of the Secretary of State should be placed in the Home Estimates, and gave power for the same change to be made, if thought fit, with regard to all or any part of the other expenses of the India Office establishment. This part of the Bill was confessedly a skeleton only, and the report of Lord Crewe's Committee, with dissentient minutes, gave material for the Joint Parliamentary Committee under Lord Selborne's chairmanship to embody far-reaching proposals in the Bill as reported to Parliament.

Secretary of State.

The Right Hon. Edwin S. Montagu, M.P.

Under-Secretaries of State.

Sir William Duke, G.C.I.E.

The Right Hon. Lord Sinha, K.C.

Assistant Under-Secretaries of State.

Sir Malcolm Seton.

Sir Arthur Hirtzel, K.C.B.

Council.

Sir Charles Arnold White.
 Sir Murray Hammick, K.C.S.I., C.I.E.
 Sir Charles S. Bayley, G.C.I.E., K.C.S.I., I.S.O.
 William Didsbury Sheppard, C.I.E.
 Sir Marshall Frederick Reid, C.I.E.
 General Sir E. G. Barrow, G.C.B., G.C.S.I.
 Sir James Bennett Brunyate, K.C.S.I., C.I.E.
 Sahibzada Aftab Ahmed Khan.
 Sir Chettur Sankaran Nair, K.C.I.E.
 Bhupendranath Basu.
 Frederick Craufurd Goodenough.
 Sir George O. Roos-Keppel, G.C.I.E., K.C.S.I.
Clerk of the Council, Sir Malcolm Seton.
Deputy Clerk of the Council, E. J. Turner, C.B.E.
Private Secretary to the Secretary of State, S. K. Brown.
Assistant Private Secretaries, A. L. R. Parsons, and Miss Freeth.
Political A.-D.-C. to the Secretary of State, Lieut.-Col. Sir J. R. Dunlop Smith, K.C.S.I., K.C.V.O., C.I.E.
Private Secretary to Sir T. W. Holderness, R. H. A. Carter.
Private Secretary to Lord Sinha, R. H. A. Carter.

Correspondence Departments.**SECRETARIES.**

Financial, W. Robinson, C.B.E. and F. H. Lucas, C.V.O., C.B.
Judicial and Public, Sir Malcolm C. C. Seton, K.C.B.
Military, Lieut.-General Sir Herbert V. Cox, K.C.B., K.C.M.G., C.S.I.
Political and Secret, J. E. Shuckburgh, C.B.
Public Works, Hermann A. Haines.
Revenue and Statistics, L. J. Kershaw, C.S.I., C.I.E.
Director-in-Chief of the Indo-European Telegraph, *Public Works Department*, R. C. Barker, C.I.E.

ACCOUNTANT-GENERAL'S DEPARTMENT:—

Accountant-General, R. G. Jaquet, C.I.E., also *Director of Funds and Official Agent to Administrators-General in India*.
Deputy, W. S. Durrant.

STORE-DEPARTMENT—INDIA OFFICE BRANCH:—

Director-General, George H. Collier, C.I.E.
Deputy Director, R. R. Howlett.

INDIA STORE DEPOT, Belvedere Road, Lambeth, S. E. Superintendent, Lt.-Col. S. S. W. Paddon, C.I.E.

REGISTRY AND RECORD DEPARTMENT.—Registrar and Superintendent of Records, W. Foster, C.I.E.
Auditor, H. A. Cooper.

Miscellaneous Appointments.

Government Director of Railway Companies, G. Deuchars.
Librarian, Fredk. W. Thomas, M.A., P.H.D.
Educational Adviser for Indian Students, T. W. Arnold, C.I.E., LITT. D., M.A.
Local Adviser to Indian Students in London, N. C. Sen (21, Cromwell Rd., S.W. 7).
President of Medical Board for the Examination of Officers of the Indian Services and Adviser to the Secretary of State on Medical matters, Surg.-Gen. Sir R. H. Charles G.C.V.O., M.D.,

I.M.S. (retd.), F.R.C.S.I.; *Members of the Medical Board*, Lt.-Col. J. Anderson, C.I.E., I.M.S. (retd.) and Lt.-Col. C. T. Hudson, C.M.G., I.M.S.

Legal Adviser and Solicitor to Secretary of State, Sir Edward Chamier.

Inspector of Military Equipment and Clothing, Major-Gen. Sir John Steevens, K.C.B., K.C.M.G.
Surveyor and Clerk of the Works, T. H. Winny, A.R.I.B.A.

Ordnance Consulting Officer, Col. M.S.C. Campbell, C.I.E., R.A.

Consulting Engineers, Messrs. Rendel, Palmer and Tritton.

Stockbroker, Horace Hubert Scott.

Secretaries of State for India.

	Assumed charge.
Lord Stanley, P.C. (a)	1858
Sir Charles Wood, Bart. (b)	1859
Earl de Grey and Ripon, P.C. (c)	1866
Viscount Cranborne (d)	1866
Sir Stafford Northcote, Bart. (e)	1867
The Duke of Argyll, K.T., P.C.	1868
The Marquis of Salisbury, P.C. (2nd time)	1874
Gathorne Hardy, P.C., created Viscount Cranbrook, 14 May, 1878 (f)	1878
The Marquis of Hartington, P.C. (g)	1880
The Earl of Kimberly, P.C.	1882
Lord Randolph Churchill, P.C.	1885
The Earl of Kimberley, K.G., P.C. (2nd time)	1886
Sir Richard Assheton Cross, G.C.B., P.C., created Viscount Cross, 19 Aug., 1886	1886
The Earl of Kimberley, K.G., P.C. (3rd time)	1892
H. H. Fowler (h)	1894
Lord George F. Hamilton, P.C.	1895
St. John Brodrick (i)	1903
John Morley, O.M. (j)	1905
The Earl of Crewe, K.G.	1910
Viscount Morley of Blackburn, O.M.	1911
The Earl of Crewe, K.G. (k)	1911
Austen Chamberlain, M.P.	1915
E. S. Montagu, M.P.	1917

- (a) Afterwards (by succession) Earl of Derby.
 (b) " (by creation) Viscount Halifax.
 (c) " (by creation) Marquess of Ripon.
 (d) " (by succession) Marquess of Salisbury.
 (e) " (by creation) Earl of Idlesleigh.
 (f) " (by creation) Earl Cranbrook.
 (g) " (by succession) Duke of Devonshire.
 (h) " (by creation) Viscount Wolverhampton, G.C.S.I.
 (i) " (by succession) Viscount Middleton.
 (j) " (by creation) Viscount Morley of Blackburn, O.M.
 (k) " (by creation) Marquess of Crewe, K.G.

The Provincial Governments.

British India is divided into eight large provinces and six lesser charges, each of which is termed a Local Government. The eight major provinces are the Presidencies of Madras, Bombay, and Bengal; the Lieutenant-Governorships of the United Provinces, The Punjab, Burma, and Behar; and the Chief Commissionership of the Central Provinces. The minor provinces are Assam, the North-West Frontier Province, Baluchistan, Coorg, Ajmere Merwara and the Andaman Islands. The original division of British authority in India was between the Presidencies of Bengal, Madras and Bombay. Bengal afterwards developed into and was separated from the Government of India and then was gradually divided into provinces as the tide of conquest brought under administration areas too large to be controlled by a single authority. The status and area of these provinces have been varied from time to time to meet the changed conditions of the day. The most recent of these changes was the separation of the North-West Frontier from the Punjab in 1901; the division of Bengal into two provinces in 1905; and the final adjustment made in accordance with His Majesty the King's announcement at the Durbar of 1911, whereby the newly-created province of Eastern Bengal and Assam disappeared, and Bengal was re-divided into the Presidency of Bengal, the Lieutenant-Governorship of Behar and Orissa, and the Chief Commissionership of Assam, whilst the headquarters of the Government of India were moved from Calcutta to Delhi, and the City of Delhi, with an *enclave* of territory surrounding it, was taken under the direct administration of the Government of India. All Local Governments alike are under the superintendence and control of the Governor-General in Council. They must obey orders received from him, and they must communicate to him their own proceedings. But each Local Government is the Executive head of the administration within the province. By custom, all appointments to Local Governments are for a term of five years.

The Three Classes.

The three Presidencies occupy a superior position. The Civil administration of each is vested in a Governor-in-Council, appointed by the Crown, and usually drawn from English public life. On certain matters they correspond directly with the Secretary of State, a privilege not possessed by other provincial Governments. The Governors are assisted by a Council composed of three members, two members of the Civil Service and, under the Indian Councils Act of 1909, a fourth member who is usually an Indian. Like the Governor-General they are addressed as Your Excellency, and they are escorted by a bodyguard. The maximum salaries as fixed by Act of Parliament are Rs. 1,20,000 for a Governor and Rs. 64,000 for a member of Council.

Lieutenant-Governors are appointed by the Governor-General subject to the approbation of the Crown. They must have served for at least ten years in India. Under the Indian Councils Act power was taken to create executive councils in the Lieutenant-Governorships and this has been applied to Behar where the Lieutenant-Governor is assisted by a Coun-

cil consisting of two members of the Civil Service and one Indian. Lieutenant-Governors are addressed as Your Honour. Their maximum salary, Rs. 1,00,000, is fixed by Act of Parliament.

Chief Commissioners stand upon a lower footing, being delegates of the Governor-General-in-Council. In theory, a Chief Commissioner administers his province on behalf of the Governor-General-in-Council, who may resume or modify the powers that he has himself conferred. In practice, the powers entrusted to Chief Commissioner of the Central Provinces are as wide as those exercised by a Lieutenant-Governor. The salary of a Chief Commissioner is Rs. 50,000 but in the case of the Central Provinces this was raised to Rs. 62,000 in consideration of the addition of Berar to his Government.

Provincial Councils.

The changes made in the constitution and non-legislative functions of the Legislative Councils of Madras and Bombay by the Act of 1909 more than doubled the number of members, election by specially constituted electorates was introduced, and powers were given to members to debate and move resolutions on the provincial financial statements, to move resolutions on matters of general public interest, and to ask supplementary questions. A description of the system in Bombay will show how the scheme works. The Bombay Legislative Council is composed of four *ex-officio* members (the three members of the Executive Council and the Advocate-General) and 44 additional members. Of the additional members the Governor nominates twenty-three (of whom not more than fourteen may be officials) and 21 are elected. The Government is thus without a majority of officials in the Council. Of the elected members, eight are elected by groups of municipalities and the District Boards, four by Mahomedan electorates, and three by electorates of the land-holding classes. The Bombay University, the Bombay Municipal Corporation, the Bombay Chamber of Commerce, the Karachi Chamber of Commerce, and the Mill-owner's Association, and the Indian Commercial Community, each elect one member. The regulations for the formation of electorates, and as to the qualifications and disqualifications of candidates and voters, are similar to those made in the case of the Supreme Council.

The rules for the discussion of the annual financial statement are similar to those applicable to the Supreme Council. The Financial Statement is presented and considered as a whole and then in detail, and resolutions may be moved. The Government is not bound by any resolutions which the Council may pass. Matters of general public interest under the control of Local Governments may be made the subject of resolutions. Laws passed by these Legislative Councils require the sanction of the Governor-General and may be disallowed by the Crown.

In constitution, in functions, and in the system of special electorates, the Legislative Councils in the Lieutenant-Governorships resemble in all the essential particulars the Legislative Council of Bombay.

The Secretariat.

Each Local Government works through a Secretariat, which is divided into various departments, each under a Secretary. In addition to the Secretaries, there are special departmental heads such as the Inspectors General of Police, Jails, and Registration; the Director of Public Instruction, the Inspector-General of Civil Hospitals or Surgeon-General, the Sanitary Commissioner and the Superintendent of the Civil Veterinary Department. There are also Chief Engineers for Public Works and Irrigation, who are likewise Secretaries to Government. In nearly all the Provinces except Bombay, the revenue departments are administered, under Government, by a Board of Revenue.

The District Officer.

The administrative system is based on the repeated sub-division of territory, each administrative area being in the responsible charge of an officer who is subordinate to the officer next in rank above him. The most important of these units is the District, and India embraces more than 250 Districts, with an average area of 4,430 square miles and an average population of 931,000. In Madras there is no local officer above the head of the District; elsewhere a Commissioner has the supervision of a Division comprising from four to six Districts. The head of a District is styled either the Collector and District Magistrate or the Deputy Commissioner. He is the representative of the Government and embodies the power of the State. He is concerned in the first place with the land and the land revenue. He has also charge of the local administration of the excise, income tax, stamp duty and other sources of revenue. As a Magistrate of the first class, he can imprison for two years and fine up to a thousand rupees. In practice he does not try many criminal cases, although he supervises the work of the other Magistrates in the District.

In addition to these two main departments, the Collector is interested in all matters pertaining to the welfare of the people. In some branches of the administration his functions are, in consequence of the formation of special departments, such as those of Public Works, Forests, Jails, Sanitation, and Education less direct than was formerly the case. But even in matters dealt with by separate departments, his active co-operation and direction in counsel are needed. The Municipal Government of all considerable towns is vested in Municipalities but it is the duty of the Collector to guide and control their working. He is usually the Chairman of the District Board which, with the aid of subsidiary boards, maintains roads, schools and dispensaries, and carries out sanitary improvements in rural areas.

Other Officers.

Other important district officers are the Superintendent of Police, who is responsible for the discipline and working of the police force, and the Civil Surgeon, who (except in Bombay) is the head of the medical and sanitary administration. The local organisation of Government Public Works, Forests, Education and other special departments varies in different parts of the country. Each District has its own law officer, styled the Government Pleader.

The Districts are split up into sub-divisions; under Junior Officers of the Indian Civil Ser-

vice or members of the Provincial Service called Deputy Collectors. In Madras, Bombay and the United Provinces there are smaller sub-district units called taluks or tahsils, administered by tahsildars (Bombay Mamlatdars), with naib tahsildars or mahalkarris. The tahsildar is assisted by subordinate officers, styled revenue inspectors or kanungos and the village officers. The most important of the latter are the headman who collects the revenue, the karnam, karkun or patwari who keeps the village accounts, and the chaukidar or village watchman.

Trend of Provincial Government.

The relations of the Provincial administrations with the Government of India form the subject of incessant discussion. On the one side there are the strong centralisers who would focus all authority in the Government of India; on the others those stout advocates of provincial autonomy who would make the Local Governments virtually independent of the Government of India. The trend of Indian policy since the departure of Lord Curzon has been steadily in the direction of increasing the authority of the Provincial Governments and the control and interference of the Government of India has been materially reduced, especially in financial matters. There was a marked development of this policy adumbrated in the despatch of the Government of India which submitted to the Secretary of State the proposal to remove the headquarters of the Government of India from Calcutta to Delhi. This paragraph thus indicated the ideas of the supreme authorities; although the extreme interpretation placed upon it by some Indian publicists had to be repudiated, it remains the most authoritative exposition of the trend of Indian policy.

The maintenance of British rule in India depends on the ultimate supremacy of the Governor-General in Council, and the Indian Councils Act of 1909, itself bears testimony to the impossibility of allowing matters of vital concern to be decided by a majority of non-official votes in the Imperial Legislative Council. Nevertheless it is certain that, in the course of time, the just demands of Indians for a larger share in the government of the country will have to be satisfied, and the question will be how this devolution of power can be conceded without impairing the supreme authority of the Governor-General in Council. The only possible solution of the difficulty would appear to be gradually to give the Provinces a larger measure of self-Government, until at last India would consist of a number of administrations, autonomous in all provincial affairs, with the Government of India, above them all, and possessing power to interfere in case of misgovernment, but ordinarily restricting their functions to matters of Imperial concern. In order that this consummation may be attained, it is essential that the supreme Government should not be associated with any particular Provincial Government. The removal of the Government of India from Calcutta is, therefore, a measure which will, in our opinion, materially facilitate the growth of Local Self-Government on sound and safe lines. It is generally recognised that the capital of a great central Government should be separate and independent, and effect has been given to this principle in the United States, Canada and Australia."

Administrative Divisions.

Provinces.	No. of Districts.	Area in Square miles.	Population (1911).
Ajmer Merwara	2	2,711	501,395
Andamans and Nicobars .. .. .	....	3,143	26,459
Assam	12	52,959	6,713,635
Baluchistan	6	45,804	414,412
Bengal	28	78,412	45,483,077
Bihar and Orissa	21	83,205	34,490,084
Bombay (Presidency)	26	123,064	19,672,642
Bombay	26	75,918	16,113,042
Sind	6	47,066	3,513,435
Aden .. .. .	....	80	46,165
Burma	41	236,738	12,115,217
Central Provinces and Berar	22	100,345	13,916,308
Coorg	1	1,582	174,976
Madras	24	141,726	41,405,404
North-West Frontier Province (Districts and administered Territories)	5	16,466	2,196,933
Punjab	29	97,209	19,974,956
United Provinces of Agra & Oudh	48	107,164	47,182,044
Agra	36	83,198	34,624,040
Oudh	12	23,966	12,558,004
Total British Territory.. ..	267	1,097,901	244,267,542

States and Agencies.	No. of Districts.	Area in Square miles.	Population (1911).
Baluchistan States	86,511	396,432
Baroda State	8,099	2,032,798
Bengal States	32,773	4,533,161
Bombay States	65,761	7,411,567
Central India Agency	78,772	9,356,980
Central Provinces States	31,188	2,117,002
Eastern Bengal and Assam States	575,835
Hyderabad State	82,698	13,374,676
Kashmir State	80,900	3,158,126
Madras States	9,969	4,811,841
Cochin State	918,110
Travancore State..	3,423,975
Mysore State	29,444	5,806,193
North-West Frontier Province Agencies and Tribal areas).	1,622,094
Punjab States	36,532	4,212,794
Rajputana Agency	127,541	10,530,432
Sikkim	87,920
United Provinces States	5,079	832,036
Total Native States..	675,267	70,864,995
Grand Total, India..	1,773,168	315,132,537

The Bombay Presidency.

The Bombay Presidency stretches along the west coast of India, from Sind in the North to Kanara in the South. It embraces, with its dependencies and Aden, an area of 186,923 square miles and a population of 27,084,317. Of this total 65,761 square miles are in Native States, with a population of 7,411,675. Geographically included in the Presidency but under the Government of India is the first class Native State of Baroda, with an area of 8,182 square miles and a population of 2,032,798. The outlying post of Aden is under the jurisdiction of the Bombay Government: it has an area of 60 square miles and a population of 46,165.

The Presidency embraces a wide diversity of soil, climate and people. In the Presidency Proper are the rich plains of Gujarat, watered by the Nerbudda and the Tapti, whose fertility is so marked that it has long been known as the garden of India. South of Bombay City the province is divided into two sections by the Western Ghats, a range of hills running parallel to the coast. Above Ghats are the Deccan Districts, with a poor soil and an arid climate, south of these come the Karnatic districts. On the sea side of the Ghats is the Konkan, a rice-growing tract, intercepted by creeks which make communication difficult. Then in the far north is Sind, totally different from the Presidency Proper, a land of wide and monotonous desert except where irrigation from the Indus has brought abounding fertility.

The People.

The population varies as markedly as soil and climate. In Sind Mahomedans predominate. Gujarat has remained true to Hinduism although long under the dominion of powerful Mahomedan kings. Here there is an amplitude of caste divisions, and a people, who although softened by prosperity, are amongst the keenest trading races in the world. The Deccan peasant has been seasoned by adversity; the saying goes that the Deccan expects a famine one year in every three, and gets it; the population is much more homogeneous than in Gujarat, and thirty per cent. are Mahrattas. The Karnatic is the land of the Lingayets, a Hindu reforming sect of the twelfth century, and in the Konkan there is a large proportion of Christians. Four main languages are spoken, Sindi, Gujarati, Marathi and Kanarese, with Urdu a rough *lingua franca* where English has not penetrated. The main castes and tribes number five hundred.

Industries.

The principal industry is agriculture, which supports sixty-four per cent. of the population. In Sind the soils are wholly alluvial, and under the influence of irrigation produce yearly increasing crops of wheat and cotton. In Gujarat they are of two classes, the black cotton soil, which yields the famous Broach cottons, the finest in India, and alluvial, which under careful cultivation in Ahmedabad and Kaira makes splendid garden land. The dominant soil characteristic of the Deccan is black soil, which produces cotton, wheat, gram and millet, and in certain tracts rich crops of sugar cane. The Konkan is a rice land, grown under the abundant rains of the submontane regions, and in the south the Dharwar cotton vies with Broach as the best in India. There

are no great perennial rivers suitable for irrigation, and the harvest is largely dependent upon the seasonal rainfall, supplemented by well irrigation. A chain of irrigation works, consisting of canals fed from great reservoirs in the region of unfailing rainfall in the Ghats, is gradually being completed, and this will ultimately make the Deccan immune to serious drought. More than any other part of India the Presidency has been scourged by famine and plague during the past twenty years. The evils have not been unmixed, for tribulation has made the people more self-reliant, and the rise in the values of all produce, synchronising with a certain development of industry, has induced a considerable rise in the standard of living. The land is held on what is known as the ryotwari tenure, that is to say, each cultivator holds his land direct from Government under a moderate assessment, and as long as he pays this assessment he cannot be dispossessed.

Manufactures.

Whilst agriculture is the principal industry, others have no inconsiderable place. The mineral wealth of the Presidency is small, and is confined to building stone, salt extracted from the sea, and a little manganese. But the handicrafts are widely distributed. The handloom weavers produce bright-coloured saris, and to a diminishing extent the exquisite kincobs of Ahmedabad and Surat. Bombay silver ware has a place of its own, as well as the brass work of Poona and Nasik. But the tendency is to submerge the indigenous handicrafts beneath industry organised on modern lines. Bombay is the great centre in India of the textile trade. This is chiefly found in the headquarter city, Bombay, where the industry embraces 29,33,775 spindles and 57,921 looms and employs 1,23,713 hands and consumes 39,71,849 cwt. of cotton. This industry is now flourishing, and is steadily rising in efficiency. In lieu of producing immense quantities of low grade yarn and cloth, chiefly for the China market, the Bombay mills now turn out printed and bleached goods of a quality which improves every year, and the principal market is at home. Whilst the industry centres in Bombay City, there are important offshoots at Ahmedabad, Broach and Sholapur. In Ahmedabad there are 10,48,847 spindles and 20,943 looms; in Sholapur 2,44,164 spindles and 3,982 looms; and in the Presidency 47,14,754 spindles and 91,518 looms. Great impetus has been given to Bombay industries by the provision of electric power generated fifty miles away on the Ghats, and the year 1919 witnessed a phenomenal flotation of new industrial companies of almost every description.

The situation of Bombay on the western sea-board, in touch at once with the principal markets of India and the markets of the west, has given Bombay an immense sea-borne trade. The older ports, Surat, Broach, Cambay and Mandvie, were famous in the ancient days, and their bold and hardy mariners carried Indian commerce to the Persian Gulf and the coasts of Africa. But the opening of the Suez Canal and the increasing size of ocean steamers have tended to concentrate it in modern ports with deep water anchor-

ages, and the sea-borne trade of the Presidency is now concentrated at Bombay and Karachi, although attempts are being made to develop Mormugao, in Portuguese territory, into an outlet for the trade of the Southern Mahratta Country. The foreign trade for the port of Bombay for the year 1917-18 was as follows:—Imports Rs. 5681,36,044; Exports (Indian produce) Rs. 7614,36,629, (foreign merchandise) Rs. 658,75,719.

Administration.

The Presidency is administered by a Governor-in-Council. The Governor is appointed by the Crown, and is usually drawn from the ranks of those who have made their mark in English public life. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, and the third in practice is an Indian. Each Member takes special charge of certain departments, and cases where differences of opinion occur, or of special importance, are decided "in Council." All papers relating to public service business reach Government through the Secretariat, divided into five main departments each under a Secretary (a) Revenue and Financial: (b) Political, Judicial, and Special: (c) General, Educational, Marine and Ecclesiastical: (d) Ordinary Public Works: (e) Irrigation. The senior of the three Civilian Secretaries is entitled the Chief Secretary. The Government frequently moves. It is in Bombay from November to the end of March; at Mahabaleshwar from April to June; in Poona from June to September; and at Mahabaleshwar from October to November; but the Secretariat is always in Bombay. Under the Governor-in-Council the Presidency is administered by four Commissioners. The Commissioner in Sind has considerable independent powers. In the Presidency Proper there are Commissioners for the Northern Division, with headquarters at Ahmedabad; the Central Division at Poona; and the Southern Division at Belgaum. Each district is under a Collector, usually a Covenanted Civilian, who has under him one or more Civilians as Assistant Collectors, and one or more Deputy Collectors. A collectorate contains on an average from eight to ten talukas, each consisting of from one to two hundred villages whose whole revenues belong to the State. The village officers are the patel, who is the head of the village both for revenue and police purpose; the talati or kulkarni, clerk and accountant; the messenger and the watchman. Over each Taluka or group of village is the mamlatdar, who is also a subordinate magistrate. The charge of the Assistant Deputy Collector contains three or four talukas. The Collector and Magistrate is over the whole District. The Commissioners exercise general control over the Districts in their Divisions. The control of the Government over the Native States of the Presidency is exercised through Political Agents.

Justice.

The administration of justice is entrusted to the High Court sitting in Bombay, and comprising a Chief Justice, who is a barrister, and six puisne judges, either Civilian, Barristers, or Indian lawyers. In Sind the Court of the Judicial Commissioner (three

judges, one of whom must be a barrister) is the highest court of civil and criminal appeal. Of the lower civil courts the court of the first instance is that of the Subordinate Judge recruited from the ranks of the local lawyers. The Court of first appeal is that of the District or Assistant Judge, or of a first class subordinate judge with special powers. District and Assistant Judges are Indian Civilian, or members of the Provincial Service. In cases exceeding Rs. 5,000 in value an appeal from the decision of the Subordinate or Assistant Judge and from the decision of the District Judge in all original suits lies to the High Court. District and Assistant Judges exercise criminal jurisdiction throughout the Presidency, but original criminal work is chiefly disposed of by the Executive District Officers. Capital sentences are subject to confirmation by the High Court. In some of the principal cities Special Magistrates exercise summary jurisdiction (Bombay has four Presidency Magistrates, as well as Honorary Magistrates exercising the functions of English Justices of the Peace) and a Court of Small Causes, corresponding to the English Country Courts.

Local Government.

Local control over certain branches of the administration is secured by the constitution of local boards and municipalities, the former exercising authority over a District or a Taluka, and the latter over a city or town. These bodies are composed of members either nominated by Government or elected by the people, who are empowered to expend the funds at their disposal on education, sanitation, the construction of roads and tanks, and general improvements. Their funds are derived from cesses on the land revenue, the toll and ferry funds. The tendency of recent years has been to increase the elective and reduce the nominated element, to allow these bodies to elect their own chairmen, whilst large grants have been made from the general revenues for water supply and drainage.

Finance.

The finance of the provincial governments is marked by definite steps toward provincial financial autonomy. Up to 1870 there was one common purse for all India. Since then progressive steps have been taken to increase the independence of local Governments. Broadly, certain heads of revenue are divided with the Imperial Government, whilst certain growing heads of revenue, varying in each province, are allotted to the local Government. Thus in Bombay the land revenue, stamp revenue and revenue from assessed taxes are divided with the Government of India. All other local sources of revenue go intact to the local Government. The provincial Budget for 1919-20 shows an opening balance of Rs. 461 lakhs, revenue Rs. 1,038 lakhs, expenditure Rs. 1,036 lakhs.

Public Works.

The Public Works Department is under the control of two Chief Engineers who act as Secretaries to the Government; one for General Works and the other for Irrigation.

Under them are Superintending Engineers in charge of divisions and Executive Engineers in charge of districts, with the Consulting Architect. The chief irrigation works are in Sind and consist of a chain of canals fed by the annual inundations from the Indus and one perennial canal the Jamrao. In the Presidency proper the principal protective works are the Nera Canal, Gokak Canal, Mutha Canal and the Godavari Canal Scheme. In addition there is under construction a chain of protective irrigation works, originating in reservoirs in the Ghat regions. The Godavari canals were completed during the year 1917-18, the Pravara canals are approaching completion and the works in connection with the Hira Right Bank canal are making good progress. The capital invested in the irrigation works in the Deccan and Gujarat added up to the end of 1917-18 to Rs. 644

Police.

The Police Force is divided into three categories: District Police, Railway Police and the Bombay City Police. The District Police are under the Inspector-General who is either a member of the Gazetted Force or a Covenanted Civilian. Under him are the Deputy Inspector-Generals for Sind and the Northern and Southern Ranges of the Presidency proper, for Railways and for Criminal Investigation. District Superintendents of Police have charge of each District with a regular cadre comprising Assistant Superintendents, Sub-Inspectors, Chief Constables and Constables. The Bombay City Police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Training School at Nasik prepares young gazetted officers and the rank and file for their duties. The cost of the Police is 100 lakhs.

Education.

Education is imparted partly through direct Government agency, partly through the medium of grants-in-aid. Government maintain Arts Colleges at Bombay, Poona and Gujarat; the Grant Medical College, the Poona College of Science, the Agricultural College, Veterinary College, School of Art, Law School and a College of Commerce. A Science College in Bombay is now in course of construction. Also in Bombay City, and the headquarters of each district, a model secondary school. The other secondary schools are in private hands; the majority of the primary schools are maintained by District and Local Boards with a grant-in-aid. The Bombay Municipality is responsible for primary education in Bombay City. There are now in the Presidency 9 Arts Colleges, 4,758 Scholars; 165 boys' High Schools (attendance 53,420); 38 girls' High Schools (attendance 5,578); 438 boys' middle schools (attendance 32,787); 46 girls' middle schools (attendance 4,121); 14,396 primary schools attended by 734,308 boys and 110,030 girls. Total expenditure in British districts in 1917-18 on public instruction was Rs. 164 lakhs and in Native States was Rs. 24 lakhs.

The Educational Department is administered by a Director, with an Inspector in each Division and a Deputy Inspector with Assistants

in each district. Higher education is controlled by the Bombay University (established in 1857) consisting of the Chancellor (the Governor of the Presidency), the Vice-Chancellor (appointed by Government for two years), and 110 Fellows of whom 10 are *ex-officio*; 10 elected by the Graduates, 10 by the Faculties, and 80 are nominated by the Chancellor.

The principal educational institutions are:—

Government Arts Colleges—

- Elphinstone College, Bombay, Principal, Mr. Covertton.
- Deccan College, Poona, Principal, Mr. F. W. Bain.
- Gujarat College, Ahmedabad, Principal, the Rev. W. G. Robertson.
- Dharwar College, Principal, Mr. H. G. Rawlinson.

Private Arts Colleges—

- St. Xaviers, Bombay (Society of Jesus), Principal, Rev. Father Blatter.
- Wilson College, Bombay (Scottish Mission), Principal, Rev. Dr. Mackichan.
- Ferguson College, Poona (Deccan Educational Society), Principal, the Hon'ble Mr. R. P. Paranjpe.
- Baroda College, Baroda (Baroda State), Principal, Mr. Masani.
- Samaldas College, Bhavnagar (Bhavnagar State), Principal, Mr. Unwalla.
- Bahauddinbhai College, Junagadh State, Principal, Mr. Scott.

Special Colleges—

- Grant Medical College, Bombay (Government), Principal, Lt.-Col. Street, I.M.S.
- College of Science, Poona (Government), Principal, Dr. Allen.
- Agricultural College, Poona (Government), Principal, Dr. Harold Mann.
- Chiefs' College, Rajkot, Principal, Mr. Mayne.
- College of Science, Ahmedabad.
- Law School, Bombay, Principal, Mirza Ali Akbar Khan.
- College of Commerce, Bombay, Principal, Mr. P. Anstey.
- Veterinary College, Bombay, Mr. K. Hewlett.
- Bombay Bacteriological Laboratory, Director, Lt.-Col. Glen Liston, C.I.E., I.M.S.
- Sir J. J. School of Art, Bombay (Government), Principal, Mr. W. E. G. Solomon.
- Victoria Technical Institute, Bombay, Principal, Mr. T. Dawson.

Medical.

The Medical Department is in charge of the Surgeon-General and Sanitation of the Sanitary Commissioner, both members of the Indian Medical Service. Civil Surgeons stationed at each district headquarters are responsible for the medical work of the district, whilst sanitation is entrusted to one of the Deputy Sanitary Commissioners. Three large hospitals are maintained by the Government in Bombay, and well-equipped hospitals exist in all important up-country stations. Over four million persons including 67,000 in-patients are treated annually. The Presidency contains 7 Lunatic Asylums and 16 institutions for the treatment of Lepers. Vaccination is

carried out by a staff under the direction of the Sanitary Commissioner. Sanitary work has received an immense stimulus from the large grants made by the Government of India out of the opium surpluses. The Budget is 22·9 lakhs.

Governor and President in Council.

His Excellency The Right Hon'ble Sir George Ambrose Lloyd, G.C.I.E., D.S.O. Took his seat 17th December 1918.

Personal Staff.

Private Secy.—William Patrick Cowie, I.C.S.

Mily. Secretary—Lt.-Col. J. G. Greig, C.I.E.

Surgeon.—Capt. W. Ross Stewart, I.M.S.

Aide-de-Camp—Capt. A. K. Mac Ewan.

Honorary Aides-de-Camp.—Lt.-Col. P. R. Cadell; Commander R.C.R. Price; Meherban Sir Parshramrao Ramchandrarao alias Bhau Saheb Patwardhan, K.C.I.E., Chief of Jamkhandi; Meherban Abdul Majid Khan Diler Jang Bahadur, Nawab of Savanur; Thakor Saheb Bahadur Sinhi Man Sinhi of Palitana; Kumar Shri Shivasinhi of Jamnagar; Sheikh Abdul Khaliq of Mangrol; and Capt. J. Nethersole.

Indian Aide-de-Camp—Subadar Major Balakrishna, Rao Bahadur, 110th Mahrattas.

Members of Council.

Sir George Carmichael, K.C.S.I., I.C.S.

Mr. G. S. Curtis, C.S.I., I.C.S.

Sir Ibrahim Rahimtoola, Kt., C.I.E.

Additional Members of Council Elected.

Mr. D. V. Belvi, B.A.; LL.B. Elected by the Municipalities of the Southern Division.

Mr. G. M. Bhurgri, Bar-at-Law. Elected by the Jaghirdars and Zamindars of Sind.

Mr. Sidhanath Dhonddeo Garud.

Sardar Syed Ali El Edroos. Elected by the Muhammadan Community of the Northern Division.

Mr. Chunilal V. Mehta, M.A., LL.B.

Shaikh G. H. Hidayatallah, LL.B. Elected by the District Local Boards of the Sind Division.

Sardar Shrinivas Coopcoswami Mudaliar.

Mr. F. Clayton.

Mr. G. K. Parekh, B.A.; LL.B. Elected by the Municipalities of the Northern Division.

Raosaheb Harilal Desaihbhai Desai.

Mr. Raghunath Purushottam Paranjpye.

Mr. Abdul Kadir *alias* Fakir Mohd. *valad* Ibrahim Khan Pathan.

Sardar Dulabawa Raisingji, Thakor of Kerwada. Elected by the Sardars of Gujarat.

Mr. Manmohandas Ramji Hora. Elected by the Indian Commercial Community.

Mr. R. H. Brooke.

Sir Dinshaw Maneckjee Petit, Bart.

Mr. Harchandrai Vishindas, B.A., LL.B.

Mr. Sheriff Devji Kanji.

Mr. Pandurang Anant Desai.

Sardar Gulam Jilani Abdul Razak.

Mr. Shridhar Balkrishna Upasani.

Nominated.

The Advocate-General (*ex-officio*).

Mr. Frederick St. John Gebbie.

Major General W. E. Jennings, I.M.S.

Mr. Salebhai Karimji Barodawala.

Mr. P. J. Mead, I.C.S.

Mr. J. G. Covernton.

Dr. Cajetan Fernandes.

Dewan Bahadur Kashinath Ramchandra Godbole.

Mr. Muhammad Haji Bhai.

Mr. B. S. Kamat.

Mr. J. D. Jenkins.

Mr. J. L. Rieu, I.C.S.

Mr. Lawrence Robertson, C.S.I., I.C.S.

Mr. Lalubhai Samaldas Mehta, C.I.E.

Rao Bahadur V. S. Naik.

Khan Bahadur Pir Bakhsh *valad* Mian Muhammad.

Mr. E. L. Sale, I.C.S.

Mr. Phiroze C. Sethna, O.B.E.

Rao Bahadur G. K. Sathe.

Mr. Purushotamdas Thakurdas, C.I.E.

Mr. A. H. A. Simcox, I.C.S.

Rao Bahadur Tekchand Udhavdas.

SECRETARIES TO GOVERNMENT.

Political, Special and Judicial.—James Crerar, C.I.E., I.C.S.

Dy. Secretary, Judicial and Political Departments.—A. Montgomerie, I.C.S.

Revenue, Financial and Separate.—The Hon'ble Mr. Percy James Mead, B.A., I.C.S.

General, Educational, Marine and Ecclesiastical.—George Arthur Thomas, B.A., I.C.S.

Legal Department and Remembrancer of Legal Affairs.—George Douglas French, B.A., I.C.S.

Public Works Department.—Frederick St. John Gebbie (Ag.) and R. J. Kent *Acting Joint Secretary*.

MISCELLANEOUS APPOINTMENTS (S. C.)

Advocate-General, The Hon. Sir. T.J. Strangman.

Inspector-General of Police, L. Robertson, C.S.I., I.C.S.

Director of Public Instruction, The Hon. Mr. J. G. Covernton, C.I.E.

Surgeon-General, The Hon. Major-General W. E. Jennings, M.D., I.M.S.

Oriental Translator, Muhammad Kadir Shaikh, *Talukdari Settlement Officer*, R. G. Gordon, I.C.S.

Settlement Commissioner and Director of Land Records, F. G. H. Anderson.
Director of Agriculture and Co-operative Societies, G. F. Keatinge, C.I.E.
Registrar of Co-operative Societies, Otto Rothfeld.
Municipal Commissioner, Bombay, P. W. Monie.
Sheriff, The Hon. Mr. Purshottamdas Thakurdass, C.I.E.
Vice-Chancellor, Bombay University, Sir Chimanlal H. Setalvad.
Registrar, Bombay University, Fardunji Dastur.
Commissioner of Police, Bombay, F. C. Griffith, O.B.E.
Sanitary Commissioner, Lieut.-Col. William O'Sullivan Murphy, M.B., I.M.S.
Accountant-General (Acting), C. W. C. Carson.
Inspector-General of Prisons, Lt.-Col. J. Jackson, I.M.S.
Postmaster-General, Henry Norton Hutchinson, O.B.E., I.O.S.
Commissioner of Customs, Salt, Opium and Excise, E. L. Sale.
Collector of Customs, Bombay, G. S. Hardy, I.C.S.

GOVERNORS OF BOMBAY.

Sir Abraham Shipman 1662
 Died on the island of Anjediva in Oct. 1664
 Humfrey Cooke 1665
 Sir Gervase Lucas 1666
 Died, 21st May, 1667.
 Captain Henry Garey (*Officiating*) .. 1667
 Sir George Oxenden 1668
 Died in Surat, 14th July, 1669.
 Gerald Aungier 1669
 Died in Surat, 30th June, 1677.
 Thomas Rolt 1677
 Sir John Child, Bart. 1681
 Bartholomew Harris 1690
 Died in Surat, 10th May, 1694.
 Daniel Annesley (*Officiating*) 1694
 Sir John Gayer 1694
 Sir Nicholas Waite 1704
 William Aislabie 1708
 Stephen Strutt (*Officiating*) 1715
 Charles Boone 1715
 William Phipps 1722
 Robert Cowan 1729
 Dismissed.
 John Horne 1734
 Stephen Law 1739
 John Geekie (*Officiating*) 1742
 William Wake 1742
 Richard Bouchier 1750
 Charles Crommelin 1760
 Thomas Hodges 1767
 Died, 23rd February, 1771.
 William Hornby 1771
 Rawson Hart Boddam 1784
 Rawson Hart Boddam 1785
 Andrew Ramsay (*Officiating*) 1788

Major-General William Medows 1788
 Major-General Sir Robert Abercromby, K.C.B. (a). 1790
 George Dick (*Officiating*) 1792
 John Griffith (*Officiating*) 1795
 Jonathan Duncan 1795
 Died, 11th August, 1811.
 George Brown (*Officiating*) 1811
 Sir Evan Nepean, Bart. 1812
 The Hon. Mountstuart Elphinstone .. 1819
 Major-General Sir John Malcolm, G.C.B. 1827
 Lieut.-General Sir Thomas Sidney Beckwith, K.C.B. 1830
 Died, 15th January, 1831.
 John Romer (*Officiating*) 1831
 The Earl of Clare 1831
 Sir Robert Grant, G.C.H. 1835
 Died, 9th July, 1838.
 James Farish (*Officiating*) 1838
 Sir J. Rivett-Carnac, Bart. 1839
 Sir William Hay Macnaghten, Bart. (b)
 George William Anderson (*Officiating*) .. 1841
 Sir George Arthur, Bart., K.C.H. 1842
 Lestock Robert Reid (*Officiating*) 1846
 George Russell Clerk 1847
 Viscount Falkland 1848
 Lord Elphinstone, G.C.H., P.C. 1853
 Sir George Russel Clerk, K.C.B. (2nd time) 1860
 Sir Henry Bartle Edward Frere, K.C.B. 1862
 The Right Hon. William Robert Seymour Vesey FitzGerald. 1867
 Sir Philip Edmond Wodehouse, K.C.B. .. 1872
 Sir Richard Temple, Bart., K.C.S.I. .. 1877
 Lionel Robert Ashburner, C.S.I. (*Acting*) .. 1880
 The Right Hon. Sir James Fergusson, Bart., K.C.M.G. 1880
 James Braithwaite Peile, C.S.I. (*Acting*) .. 1885
 Baron Reay 1885
 Baron Harris 1890
 Herbert Mills Birdwood, C.S.I. (*Acting*) .. 1895
 Baron Sandhurst 1895
 Baron Northcote, C.B. 1900
 Sir James Monteath, K.C.S.I. (*Acting*) .. 1903
 Baron Lamington, G.C.M.G., G.C.I.E. .. 1903
 J. W. P. Muir-Mackenzie, C.S.I. (*Acting*) .. 1907
 Sir George Sydenham Clarke, G.C.M.G.; G.C.I.E. (c). 1907
 Baron Willingdon, G.C.I.E. 1913
 Sir George Ambrose Lloyd 1918

(a) Proceeded to Madras on duty in Aug., 1793, and then joined the Council of the Governor-General as Commander-in-Chief in India on the 28th Oct., 1793.

(b) Was appointed Governor of Bombay by the Honourable the Court of Directors on the 4th Aug., 1841, but, before he could take charge of his appointment, he was assassinated in Cabul on the 23rd Dec., 1841.

(c) Afterwards (by creation) Baron Sydenham

The Madras Presidency.

The Madras Presidency, officially the Presidency of Fort St. George, together with the Native States, occupies the whole southern portion of the peninsula, and, excluding the Native States, has an area of 141,075 square miles. It has on the east, on the Bay of Bengal, a coast-line of about 1,200 miles; on the west, on the Indian Ocean, a coast-line of about 450 miles. In all this extent of coast, however, there is not a single natural harbour of any importance; the ports, with the exception of Madras, which has an artificial harbour, are merely open roadsteads. A plateau, varying in height above sea-level from about 1,000 to about 3,000 ft., and stretching northwards from the Nilgiri Hills, occupies the central area of the Presidency; on either side are the Eastern and the Western Ghats, which meet in the Nilgiris. The height of the western mountain-chain has an important effect on the rainfall. Where the chain is high, the intercepted rain-clouds give a heavy fall, which may amount to 150 inches, on the seaward side, but comparatively little rain falls on the landward side of the range. Where the chain is low, rain-clouds are not checked in their westward course. In the central tableland and on the east coast the rainfall is small and the heat in summer excessive. The rivers, which flow from west to east, in their earlier course drain rather than irrigate the country; but the deltas of the Godavari, Kistna and Cauvery are productive of fair crops even in time of drought and are the only portions of the east coast where agriculture is not dependent on a rainfall rarely exceeding 40 inches and apt to be untimely.

Population.

The population of the Presidency in 1911 was 41,402,000 and that of the Native States was 4,813,000. Hindus account for 89 per cent., Mahomedans for 6, Christians for 3, and Animists for 2. The vast majority of the population is of Dravidian race, and the principal Dravidian languages, Tamil and Telugu, are spoken by 15 and 14 million persons, respectively. Of every 1,000 people, 407 speak Tamil, 377 speak Telugu, 74 Malayalam, 37 Canarese and 23 Hindustani. It is remarkable that of the 41 millions of population all but quarter of a million belong to it by birth.

Agriculture.

About 68 per cent. of the population is occupied in agriculture, nearly 49 per cent. having a direct interest as landowners or tenants. The total cropped area of 1918-19 was 36 million acres against a normal area of 39 million acres. The shortage in the area cultivated was due to the unfavourable season created by the failure of the monsoons and also to the prevalence of influenza. There was consequently a reduction in the total yield of the chief food crops as well as industrial crops. The area under cotton cultivation, however, increased considerably on account of the high prices that the commodity secured in the market. Sugar-cane cultivation was also on the increase for a similar reason. Of the principal food crops, rice was cultivated in 10·4 million

acres as against 11·4 in a normal year, *chulam* or great millet in 5·1 million acres as against 5·2, *kambu* or spiked millet in 3 million acres as against 3·5 million acres, *ragi* or millet in 2·4 million acres as against 2·5. Of the industrial crops, groundnut was cultivated in a million acres as against 1·5 million acres in a normal year and cotton in 3·1 million acres as against 2·3. The acreage under tea, and coffee was less than 50,000 in each case and here also there was a tendency for increased output. Irrigation is unnecessary on the West Coast but on the east nearly one-third of the cultivated area has ordinarily to be irrigated. Irrigation works include 28,896 tanks, 6,164 river channels, 6,114 spring channels, 1,391 anicuts, nearly 400,000 ayacut wells, and 225,000 supplemental wells. The application of machinery to irrigation on a small scale is making considerable progress. The harvest-prices of the principal food grains were dearer than in the previous year. The stocks of grain were generally insufficient owing to the general failure of the crop. The two important export crops of Madras are cotton and ground-nut. Prior to the war nearly 40,000 tons of cotton were exported to foreign countries and 10,000 tons to other parts of India, the proportion in 1919 being 6,000 tons to foreign countries and 50,000 tons to other parts of India. Wages show a tendency to increase rapidly, owing to the great scarcity of labour.

A special feature of the agricultural activities of the Presidency is a large industry which the planting community have built up contributing substantially to the great economic development of the country during the past half a century. They have organised themselves as a registered body under the style and title of "The United Planters' Association of Southern India" on which are represented the coffee, tea and rubber and a few other minor planting produce; while safeguarding their own industry they have been able to do a great deal in adding to the wealth and resources of the country generally. So important a place do they occupy in the body-politic, that the Government have given them special representation on the Madras Legislative Council, besides passing special legislation for the control of their labour. The Government have also appointed a Deputy Director of Agriculture for the planting districts, besides one or two expert officers working in their area. H. E. Lord Willingdon is now in charge of the Agricultural and Industrial portfolio and measures are being organised for scientific development of these two departments including forest industries, on a commercial scale.

Industries.

Comparative poverty in readily exploitable mineral wealth and the difficulty of coal supply prohibit very large industrial development in the Presidency, but excellent work, both in reviving decadent industries and testing new ones, has been done under Government auspices. The only indigenous art employing a considerable number of workers is weaving.

There is no system of regular registration in vogue, and the figures given can be regarded only as approximate, but returns show a total of 1,231 factories driven by engines of an aggregate H. P. of 33,417. Of these factories 179 are concerned with cotton.

Trade.

The total value of sea borne trade of the Madras Presidency in 1917-18 was nearly 5,564 lakhs showing an increase of Rs. 732 lakhs or 15 per cent. as compared with that of the previous year. Foreign trade continued to feel the effects of the war during the first seven months of the year. With the cessation of hostilities and the partial relaxation of restrictions, trade, especially exports began to show considerable improvement. The volume of the export trade would have been greater had it not been for the unfavourable agricultural conditions, which limited the supply of raw produce available for export and for the restrictions imposed on the exports of food grains in consequence of shortage of supply in this Presidency brought about by the failure of the South-West and the lateness of the North-Eastern monsoons. A higher range of prices also contributed to the higher value of trade. The trade of the United Kingdom with Madras increased in exports while it declined under imports; the increase under the former being Rs. 751·53 lakhs or 64 per cent. and the reduction under the latter Rs. 59 lakhs or 8 per cent. The trade with the British Empire as a whole representing 85 per cent. of the aggregate trade of the Presidency, expanded by Rs. 704·13 lakhs or 30 per cent. The trade with the continent of Europe, which prior to the outbreak of the war, accounted for 28 per cent. of the total foreign trade, gradually declined to 2 per cent. during the year. Though imports from Japan and other Asiatic ports showed a slight increase, the aggregate trade with them showed a decline by Rs. 17·17 lakhs or 6 per cent. The United States' export trade improved by 34·24 lakhs but her imports dropped by Rs. 10·88. The chief Port, Madras, accounted for 48 per cent. of the total trade of the Presidency which is an advance by 6 per cent. over that of the previous year.

Education.

During the year 1918-19 the total number of public institutions rose from 32,517 to 32,879 and their strength on their rolls from 1,579,750 to 1,583,100. The percentage of male scholars to male population was 6·6 and the corresponding percentage for female scholars was 1·7. The percentage of the number of scholars, male and female, to the total population was 4·1. The total expenditure for the year rose from Rs. 226·5 lakhs to Rs. 248 lakhs. The proportions which the public funds and private funds bear to the total expenditure are 53 and 47 per cent. respectively. Elementary and secondary education had the largest share in contributing to the increase in expenditure. On the 31st March, 1919, there were: first-grade colleges for men 13, second-grade colleges for men 18, second-grade colleges for women 3, oriental colleges 11, law college 1, engineering college 1, training colleges 3, veterinary college 1, forest college 1, agricul-

tural college 1, secondary schools 418, elementary schools 29,938, special schools 292 with 1,583,087 pupils in all. There were also 4,003 private institutions imparting instructions to 109,864 pupils. The number of Indian women who were reading in the arts college was 208 and there were 40 secondary schools exclusively for Indian girls and the total number of institutions for females was 2,322 and their strength was 168,088. The Department is in charge of a Director of Public Instruction assisted by an officer of the Indian Educational Service as his deputy and two officers of the Provincial Educational Service and the Director is also the Commissioner for Government Examinations.

Government.

The Madras Presidency is governed on a system generally similar to that obtaining in Bombay and Bengal. At the head is the Governor usually selected from the ranks of British public men or of ex-Governors of Colonies; with the Governor is associated an Executive Council of three members, two of whom must have served for ten years under the Crown in India, while the third, of whom official experience is not required, is in practice, but not of necessity, an Indian. Madras administration differs, however, in some important respects from that of other major Provinces. There is no intermediate local authority between the Collector of the District and the authorities at headquarters, the Commissioner being unknown in Madras. Part of the power which would be reserved elsewhere for the Commissioner is given to the Collector, whose status is rather higher in Madras than elsewhere, and part is exercised by the Board of Revenue. Each member of the Board of Revenue is in fact a Commissioner for specific subjects throughout the Presidency. This conduces to administration by specialists and to the maintenance of equal progress in specific matters in every part of the Presidency, but it leaves the Government without an official who can judge of the general administration of large parts of the country. For these and other reasons the Decentralisation Commission recommended that a system of Commissionerships be introduced in Madras.

Finance.

According to the revised estimates for 1918-19, the Presidency's financial position was as follows in lakhs of rupees:—Opening balance, Rs. 201·08; receipts, Rs. 857·77; expenditure, Rs. 855·16; closing balance being Rs. 203·19.

Governor and President-in-Council.

His Excellency Baron Willingdon of Ratton, G.C.S.I., G.C.I.E., G.B.E. Took his seat, 10th April, 1919.

Personal Staff.

Private Secy., Mr. A. C. Duff, I.C.S.
Military Secy., Major K. O. Goldie, O.B.E.
Surgeon, Major D. P. Johnstone, R.A.M.C.
Aide-de-Camp, Capt. N. S. deBrath.
Aide-de-Camp, Capt. Donald Powell.
Extra Aide-de-Camp, Lt. H. R. Brand.

Extra Aide-de-Camp, Capt. G. Heseltine.

Commandant, H. E. the Governor's Body Guard,
Capt. Ogilvie.

Hony. Indian Aide-de-Camp, Hony. Capt. V.
S. Alexander.

Members of Council.

Divan Bahadur Sir P. Rajagopala Achariyar,
K.C.S.I.

Lionel Davidson, C.S.I., I.C.S. (On leave.)

A. R. Knapp, I. C. S. (Temporary).

C. G. Todhunter, I.C.S.

Official Additional Members.

The following is the latest list of the official
additional members of the Madras Legislative
Council:—

A. Y. G. Campbell, C.I.E.

S. Cox.

Major-General G. G. Giffard, C.S.I.

W. J. J. Howley.

R. Littlehailes.

E. S. Lloyd.

Diwan Bahadur L. D. Swamikannu Pilla
Avargal, I.S.O.

S. Srinivasa Ayyangar (*Advocate-General*).

R. A. Graham.

L. E. Buckley.

M. E. Couchman.

Non-Official Additional Members. Elected.

Diwan Bahadur P. Tyagaraya Chetty Garu.

Rev. E. M. Macphail.

C. V. S. Narasimha Raju.

K. Venkatappayya Pantulu.

Rao Bahadur T. Balaji Rao Nayudu Garu.

P. Siva Rao.

W. Vijayaraghava Mudaliyar.

B. V. Narasimha Ayyar.

V. Madhava Raja, Elaya Nambidi of Kol-
lengode.

Rao Bahadur V. K. Ramanuja Achariyar
Avargal.

Rao Bahadur T. N. Sivagnanam Pillai Avargal.
Raja of Pithapuram.

Raja of Ramnad.

B. Venkatapati Raju.

T. R. Ramachandra Ayyar.

Khan Sahib Haji Abd-ul-la Haji Qasim Sahib
Bahadur.

Yaqub Hasan Sahib Bahadur.

Khan Bahadur A. T. G. M. Ahmad Tambi
Marakkayar Sahib Bahadur.

Sir Gordon Fraser, Kt.

J. H. Thonger.

J. A. Richardson.

(2) Nominated.

T. Arumainatha Pillai.

M. Chinnathambi Raja.

Diwan Bahadur T. Desika Achariyar Avargal.

M. D. Devadoss.

H. H. G. Mitchell, O.B.E.

Khan Bahadur N. Muhammad Usman Sahib
Bahadur.

Rao Sahib M. C. Muttayya Chettiyar Avargal.

Rao Sahib T. Numberumal Chetti Garu.

Raja Sri Krishna Chandra Gajapathi Narayana
Deo Garu, Zamindar of Parlakimedi.

The Raja of Bobbili.

T. Richmond.

Rao Bahadur N. Subba Rao Avargal.

SECRETARIES TO GOVERNMENT.

Chief Secretary, R. A. Graham, I.C.S.

Revenue Secretary, E. S. Lloyd, I.C.S.

Home Secretary, R. Ramachandra Rao.

Local and Municipal Secretary, F. B. Evans,
I.C.S.

Public Works Secretary, W. J. J. Howley.

BOARD OF REVENUE.

L. E. Buckley, C.S.I., I.C.S.

M. E. Couchman, I.C.S.

L. T. Harris, I.C.S.

N. Macmichael, I.C.S.

MISCELLANEOUS APPOINTMENTS.

Commissioner of Revenue Settlement, etc., L. E.
Buckley, I.C.S.

Revenue Survey Department, Director, D. G.
Hatchell.

Director of Public Instruction, Richard Little
hailes, M.A.

Vice-Chancellor of Madras University, The Hon
Sir John Wallis.

Registrar of Madras University, F. Dewsbury.

Inspector-General of Police, Percy Beart Thomas

Surgeon-General, Major-General Gerard God-
frey Giffard, C.S.I.

Sanitary Commissioner, Major W. A. Justice.

Accountant-General, A. Newmarch.

Inspector-General of Prisons, Major John
Phillip Cameron, I.M.S.

Postmaster-General, John Monteath.

Collector of Customs, Harold Haynes Hood.

Commissioner of Salt, Abkari, etc., Mr. R. J.
Wood, I.C.S.

Inspector-General of Registration, C. R.
Schmidt.

President, Madras Corporation, J. C. Molon
I.C.S., (on leave).

*Director of the Kodaikanal and Madras Obser-
vatories*, J. Evershed.

*Supdt., Govt. Central Museum, and Principi-
al Librarian, Connemara Public Library*,
Dodwell, M.A.

Piscicultural Expert, H. C. Wilson.

Director of Agriculture, G. A. D. Stuart.

Consulting Architect, W. H. Nicholis.

Sheriff, Khan Bahadur Mirza Abdul Husa-
Sahib Bahadur.

Presidents and Governors of Fort St. George in Madras.

William Gyfford	1684
Elihu Yale	1687
Nathaniel Higginson	1692
Thomas Pitt	1698
Gulston Addison	1709
Died at Madras, 17 Oct., 1709.	
Edmund Montague (<i>Acting</i>)	1709
William Fraser (<i>Acting</i>)	1709
Edward Harrison	1710
Joseph Collet	1711
Francis Hastings (<i>Acting</i>)	1727
Nathaniel Elwick	1727
James Macrae	1725
George Morton Pitt	1730
Richard Benyon	1735
Nicholas Morse	1744
John Hinde .. .. .	..
Charles Floyer	1747
Thomas Saunders	1750
George Pigot	1755
Robert Palk	1763
Charles Bourchier	1767
Josias DuPre	1770
Alexander Wynch	1773
Lord Pigot (Suspended)	1775
George Stratton	1776
John Whitehill (<i>Acting</i>)	1777
Sir Thomas Rumbold, Bart.	1778
John Whitehill (<i>Acting</i>)	1780
Charles Smith (<i>Acting</i>)	1780
Lord Macartney, K.B.	1781

Governors of Madras.

Lord Macartney, K.B.	1785
Alexander Davidson (<i>Acting</i>)	1785
Major-General Sir Archibald Campbell, K.B.	1786
John Holland (<i>Acting</i>)	1789
Edward J. Holland (<i>Acting</i>)	1790
Major-General William Medows	1790
Sir Charles Oakeley, Bart.	1792
Lord Hobart	1794
Major-General George Harris (<i>Acting</i>)	1798
Lord Clive	1799
Lord William Cavendish Bentinck	1803
William Petrie (<i>Acting</i>)	1807
Sir George Hilario Barlow, Bart., K.B.	1807
Lieut.-General the Hon. John Abercromby.	1813
The Right Hon. Hugh Elliot	1814
Major-General Sir Thomas Munro, Bart., K.C.B. Died, 6 July, 1827	1820

Henry Sullivan Gröme (<i>Acting</i>)	1827
Stephen Rumbold Lushington	1827
Lieut.-General Sir Frederick Adam, K.C.B.	1832
George Edward Russell (<i>Acting</i>)	1837
Lord Elphinstone, G.C.H., P.C.	1837
Lieut.-General the Marquess of Tweeddale, K.T., C.B.	1842
Henry Dickinson (<i>Acting</i>)	1848
Major-General the Right Hon. Sir Henry Pottinger, Bart., G.C.B.	1848
Daniel Elliott (<i>Acting</i>)	1854
Lord Harris	1854
Sir Charles Edward Trevelyan, K.C.B.	1859
William Ambrose Morehead (<i>Acting</i>)	1860
Sir Henry George Ward, G.C.M.G.	1860
Died at Madras, 2 August, 1860.	
William Ambrose Morehead (<i>Acting</i>)	1860
Sir William Thomas Denison, K.C.B.	1861
Acting Viceroy, 1863 to 1864.	
Edward Maltby (<i>Acting</i>)	1863
Lord Napier of Merchistoun, K.T. (a)	1866
Acting Viceroy.	
Alexander John Arbuthnot, C.S.I. (<i>Acting</i>)	1872
Lord Hobart	1872
Died at Madras, 27 April, 1875.	
William Rose Robinson, C.S.I. (<i>Acting</i>)	1875
The Duke of Buckingham and Chandos	1875
The Right Hon. W. P. Adam	1880
Died at Ootacamund, 24 May, 1881.	
William Hudleston (<i>Acting</i>)	1881
The Right Hon. M. E. Grant Duff	1881
The Right Hon. Robert Bourke, P.C.	1886
Lord Connemara, 12 May, 1887 (by creation).	
John Henry Garstin, C.S.I. (<i>Acting</i>)	1890
Baron Wenlock	1891
Sir Arthur Elibank Havelock, G.C.M.G.	1896
Baron Ampthill	1900
Acting Viceroy and Governor-General, 1904.	
James Thomson, C.S.I. (<i>Acting</i>)	1904
Gabriel Stokes, C.S.I. (<i>Acting</i>)	1906
Hon. Sir Arthur Lawley, K.C.M.G., G.C.I.E.	1906
Sir Thomas David Gibson-Carmichael, Bart., K.C.M.G., G.C.I.E. (b)	1911
Became Governor of Bengal, 1 April, 1912	
Sir Murray Hammick, K.C.S.I., C.I.E.	1912
(<i>Acting</i>).	
Right Hon. Baron Pentland, P.C., G.C.I.E.	1912
Baron Willingdon	1918
(a) Afterwards (by creation) Baron Napier of Ettrick.	
(b) Afterwards (by creation) Baron Carmichael of Skirling.	

The Bengal Presidency.

The Presidency of Bengal, as constituted on the 1st April 1912, comprises the Burdwan and Presidency divisions and the district of Darjeeling, which were formerly administered by the Lieutenant-Governor of Bengal; and the Rajshahi, Dacca and Chittagong divisions which by the partition of the old Province had been placed under the administration of the Lieutenant-Governor of Eastern Bengal and Assam. The area of the Presidency is 84,092 square miles, and it possesses a population of 46,305,642 persons; included within this area are the two Native States of Cooch Behar and Hill Tippera, which are under the general supervision of the Government of Bengal. The area of the British territory is 78,699 square miles. Bengal comprises the lower valleys and deltas of the Ganges and Brahmaputra, and in the main consists of a great alluvial plain intersected in its southern portion by innumerable waterways. In the north are the Himalayan mountain and sub-montane tracts of Darjeeling and Jalpaiguri, and on the south-east the hills in Hill Tippera and Chittagong, while on the west the Chota Nagpur plateau is continued by an undulating tract running through the western portions of Midnapur, Bankura, Burdwan and Birbhum. The general range of the country however is very low, and a great fertile plain extends southward from Jalpaiguri to the forests and swamps known as the Sunderbans, which lie between the area of cultivation and the Bay of Bengal.

The People.

Of the inhabitants of the Presidency 24,237,238 or 52·4 per cent. are Mahomedans and 20,945,379 Hindus. These two major religions embrace all, but 2·4 per cent. of the population. Christians, Buddhists, and Animists combined number a little over 1,100,000.

Bengali is spoken by ninety-two per cent. of the population of the Presidency and Hindi and Urdu by four per cent. The Oriya-speaking people number nearly 300,000 and Naipali is the tongue of 89,000 persons principally residents in the Darjeeling and Jalpaiguri districts. The great majority of the speakers of the Munda languages are Santals in West and North Bengal.

Industries.

According to the returns of the Census of 1911 nearly 35½ million or three-fourths of the population derive their support from pasture and agriculture, and of these nearly 30 millions are cultivators, and nearly 3½ millions farm servants and field labourers. The area under jute in 1919 is estimated at 2,458,955 acres against 2,219,212 in 1918. The weather on account of drought in March was unfavourable for sowing of the low land crop, but latterly the unusually favourable weather produced about an average crop. Bengal is the most important rice-producing area in Northern India, and it is computed that about 85 per cent. of the cultivated area of the Presidency is devoted to its production. Other crops include barley, wheat, pulses and oil-seeds, the area devoted to the last named being 1,523,400 acres. Sugar is produced both from the sugar-cane and

from the date-palm, and tobacco is grown for local consumption in nearly every district of Bengal. The area under tea in 1918-19 was 169,100 acres. There were 305 plantations employing a daily average of 105,365 permanent and 27,443 temporary hands.

Manufacture and Trade.

The main industries in this part of India in addition to the agricultural industry are the jute mill industry, the tea industry (largely an Assam industry) and Coal mining. The Jute Mills in and around Calcutta constitute the principal manufacturing industry of the Presidency. During the first half of 1918 Bengal jute mills worked full time but from 9th November, five days week working was introduced, which continued till the 9th of December when working time was further reduced to four days. From the third week of January 1919, however, they resumed five days working in a week. There were 72 mills belonging to 48 companies (including three private concerns) at work throughout the year with 38,951 looms and 815,479 spindles. The average number of persons employed daily was 2,66,664. There were no difficulties as regards the supply of labour. The total profits (after deduction of interest on debentures but subject to allowances for depreciation) made by 43 Jute Mill Companies in Bengal (owning 68 Mills) at the close of the year 1918 were about Rs. 16 crores. The corresponding figures for 1914, 1915, 1916 and 1917 were Rs. 1·23, Rs. 6·99, 9·23 and 6·46 lakhs respectively. The value of the exports of Raw Jute by sea from Calcutta during 1918-19 increased by 5·60 lakhs to Rs. 11·84 lakhs. The quantity exported also was more than in the preceding year by 104,606 tons. The Jute cess benefited the Calcutta Improvement Trust to the extent of Rs. 8·08 lakhs, while Rs. 7·4 lakhs were collected in the preceding year. The exports of raw and manufactured Jute represented 63 per cent. of Calcutta's exports during 1918-19 and jute manufactures were, it may be noted, India's premier export in that year. Other principal industries are cotton twist and yarn, silk yarn and cloth, handmade cloth, sugar, molasses and paper. Fourteen cotton mills were at work during 1918-19 employing daily on an average 11,000 persons. The silk weaving industry continues to decline. There was only one silk mill working during 1918 which employed 94 hands. The manufacture of tea is carried on an extensive scale in Darjeeling and Jalpaiguri. The capital employed by joint stock companies in the industry in India amounts to about Rs. 34 crores and the daily average labour force to 783,000. In 1918 the number of coal mines under the scope of the Indian Mines Act worked in Bengal was 290. The total output for Bengal was 5,302,000 tons against 4,632,000 tons raised in 1917, while the output of all the mines in Bengal, Bihar and Orissa, and Assam amounted to 19,277,000 tons. The capital of joint stock coal companies only in the industry employed in these provinces is approximately Rs. 731 lakhs. The

daily average of persons employed in the coal mines in Bengal was 46,149 and in Bengal, Bihar and Orissa, and Assam 168,083. Three paper mills produced paper valued at Rs. 82 lakhs in 1918.

In 1918-19 the foreign seaborne trade of Bengal (excluding treasure but including Government stores) amounted to Rs. 179 crores of which Rs. 72 crores represented imports and Rs. 107 crores exports. Of the total foreign and coasting trade of Bengal, 96 per cent. was the share of Calcutta. The six chief exports from Bengal are in order of importance; jute (raw and manufactures), tea, hides and skins (raw), grain, pulse and flour, seeds and opium and the six leading imports are cotton goods, metals, sugar, machinery and mill-work, salt, and oils.

Administration.

The present form of Government dates from the 1st of April 1912, when the administrative changes announced by the King-Emperor at Delhi in December 1911 came into operation. A Governor was then substituted for a Lieutenant-Governor, who had previously been at the head of the Province, and Lord Carmichael of Kirkcubright assumed charge of the office. He was succeeded by the Earl of Ronaldshay in March 1917. The Governor is assisted by an Executive Council, two of whom are at present members of the Indian Civil Service and the third an Indian. The Civil Secretariat consists of the Chief Secretary, who is in charge of the Political and Appointment Department, the Judicial Secretary, the Revenue Secretary, the Financial Secretary, who also deals with Commercial questions, the General Secretary who deals with questions of Local Self-Government and Education and the Legislative Secretary, four Under-Secretaries and one Assistant Secretary. The Government divides its time between Calcutta, Darjeeling and Dacca.

Bengal is administered by five Commissioners under the Governor in Council, the divisions being those of the Presidency, Burdwan, Rajshahi, Dacca and Chittagong. The unit of administration is the District Magistrate and collector. As Collector he supervises the gathering of the revenue and is the head of all the Departments connected with it, while as District Magistrate he is responsible for the administration of Criminal justice in the district. The immediate superior of the District Magistrate is the Divisional Commissioner. Commissioners are the channels of communication between the local officers and the Government. In certain revenue matters they are, in their own right, subject to the Board of Revenue in Calcutta; in other matters they are under the direct control of Government.

Justice.

The administration of justice is entrusted to the High Court of Calcutta which consists of the Chief Justice who is a barrister and 14 puisne judges including one additional judge who are barristers, civilians or vakils. Below the High Court are the District and Additional Judges, the Small Cause Court and Subordinate Judges and the Munsifs. Of these officers the District and Additional Judges and

a certain number of subordinate judges are also endowed with the power of a Criminal Court while the remainder have jurisdiction in Civil matters only. Criminal justice is administered by the High Court, the Courts of Session and the courts of the various classes of magistrates. On its appellate side the High Court disposes of appeals from the order of a Court of Session, and it also confirms, modifies or annuls sentences of death passed by Sessions Courts. Calcutta has four Presidency Magistrates, two Municipal Magistrates and also a number of Honorary Magistrates and it possesses a Court of Small Causes with judges including one additional judge who dispose of cases of the class that are usually heard in County Courts in England.

Local Self-Government.

By Bengal Act III of 1884 which regulates municipal bodies in the interior and its subsequent amendments the powers of Commissioners of municipalities have been increased, and the elective franchise has been extended. Municipal expenditure now comprises a large number of objects, including veterinary institutions and the training and employment of Health Officers and Sanitary Inspectors and female medical practitioners. The Commissioners also have large powers in regard to the water-supply and the regulation of buildings. In Calcutta Act (III) of 1899 created three co-ordinate municipal authorities, the Corporation, the General Committee, and the Chairman. The total number of Commissioners is fifty, of whom 25 are elected, and the remainder appointed by Government and by commercial bodies. In order to improve the insanitary and congested areas of the city, the Calcutta Improvement Trust has been created with extensive powers. In the mofussil, District and Local Boards exercise considerable powers, with regard to Public Works, Education and Medical relief and Union Committees have been formed which deal for the most part with the control of village roads, sanitation and water-supply.

Bengal Act V of 1911 introduces a new system of self-government by the creation of village authorities vested with the power and duties necessary for the management of communal village affairs and entrusted with powers of self-taxation. The new village authority, to be called the Union Board, will replace the existing Chankidari *panchayats* and the Union Committee and will deal with the village police, village roads, water supply, sanitation, primary school and dispensaries. The Act also empowers Government to create out of the members of the Union Board Village Benches and Courts for the trial of petty criminal and civil cases arising within the union.

Finance.

As in other Provinces, the revenue is divided between the Local Government and the Government of India. The Budget for 1918-19 showed an opening balance of Rs. 3.70 crores, estimated revenue amounted to Rs. 7.30 crores and expenditure aggregated Rs. 7.77 crores. Of the closing balance of Rs. 3.23 lakhs, Rs. 2.7 lakhs was earmarked for various objects.

Public Works.

The Public Works Department is under the charge of a Chief Engineer who is also the Secretary to Government in the P. W. and Railway Departments and the Irrigation Department is under the charge of second Chief Engineer who is as well the Secretary to Government in the Irrigation and Marine Departments.

The P. W. D. deals with questions regarding the construction of public buildings and roads and the carrying out of miscellaneous public improvements.

The Railway Department deals with questions regarding acquisition of lands required by the several Railways and alignment of main lines of Railways and Tramway projects.

The Irrigation Department deals with matters connected with the numerous embankments and drainage works as well as the waterways that intersect the Presidency.

The Marine Department deals with all questions connected with the Bengal Pilot Service, merchant shipping, boiler commission, smoke nuisance and the importation, possession, &c., of petroleum and the importation of explosives.

Police.

The Bengal Police force comprises the Military Police, the District Police, the Railway Police, and the River Police. The Bengal Police are under the control of the Inspector-General of Police, the present Inspector-General being a member of the Imperial Police Service. Under him are Deputy Inspectors-General, for the Dacca Range, the Rajshahi range, the Presidency range, the Burdwan range and the Bakarganj range and also two Deputy Inspectors-General, one in charge of the C. I. D., and the other in charge of the Intelligence Branch of the C. I. D. Each district is in charge of a Superintendent, and some of the more important districts have an Additional Superintendent. The Railway Police is divided into three distinct charges each under a Superintendent. The River Police is also under a Superintendent. The cadre comprises Assistant Superintendents, Deputy Superintendents, Inspectors, Sub-Inspectors, Sergeants, head constables and constables. There is also a Village Police, composed of daffadars and chowkidars, who receive a monthly salary which is collected from the villages by the Panchayat. In the Madaripur Sub-Division however the daffadars who are whole-time servants are paid partly by Government and partly by the Panchayat. The Calcutta City police is a separate force maintained by Government under a Commissioner who is responsible direct to Government. The Commissioner has under him Deputy Commissioners, Assistant Commissioners, Inspectors, Sub-Inspectors, European Sergeants, head constables and constables. A school for the training of recruits for the Calcutta Police force has been established at Calcutta. There is a training college and school at Sardah, in the district of Rajshahi where newly appointed gazetted officers, Sub-Inspectors and constables of the Bengal police learn their duties. There are two other schools at Dacca and Berhampore for the training of constables. The annual cost of the Police is over Rs. 130 lakhs.

Medical.

The head of the Medical Department is the

Surgeon General with the Government of Bengal, and Sanitation is in charge of the Sanitary Commissioner, the former appointment is always held by a member of the Indian Medical Service, while the latter post is also ordinarily held by a member of that service. There is also a Sanitary Engineer for the Presidency. In the districts the Civil Surgeons are responsible for medical work. There are 22 hospitals in Calcutta, 10 of which are supported by the Government and 439,806 persons are treated at these institutions during 1913, of whom 34,703 were in-patients. In the mofussil districts there are 738 hospitals and dispensaries; the number of patients treated in them during 1918 was 63,68,171 including 72,028 in-patients.

Education.

In the Presidency of Bengal education is imparted partly through Government agency and partly through private bodies, assisted to some extent by Government grants-in-aid. Government maintains three Arts Colleges in Calcutta (of which one is a college for women and one the Sanskrit College), one at Hughli, one at Krishnagar, one at Dacca, one at Rajshahi and one at Chittagong. It also maintains two training colleges, one at Calcutta and one at Dacca, for teachers who teach in secondary schools through the medium of English and 5 normal schools, one in each division, for the training of teachers in secondary schools through the medium of the vernacular; also an engineering college at Sibpur and an engineering school at Dacca, a medical college, a veterinary college, a school of art and a commercial school in Calcutta and a weaving school at Serampore. It also provides at the headquarters of all districts, except Burdwan and Midnapore, and also at certain other mofussil centres, High English schools for the education of boys, while to some Government Arts Colleges high schools are attached. In Calcutta there are Government four high schools for boys, two of which are attached to Presidency College and one to the Sanskrit College. There is another school at Hastings House, Alipor, which is a residential institution. Government high schools for girls exist only in the headquarters stations of Calcutta, Dacca, Mymensingh and Chittagong. The other secondary schools, with the exception of a few middle schools managed either by Government or by municipal and district boards, are under private control. The administration of primary education in all areas, which are not under municipalities, rests with the district boards, grants being given from provincial revenues to the boards, which contribute only slightly from their own funds. Only in backward localities are such schools either entirely managed, or directly aided, by Government. Apart from the institutions referred to above 112 institutions called Guru Training Schools are maintained by the Departments for the training of vernacular teachers. For the education of Mohomedans, there are senior madrasas at Calcutta, Dacca, Chittagong and Hughli, and on junior madrasa at Rajshahi which are managed by Government. There are also certain Government institutions for technical and industrial education. A large proportion of education

work of every grade is under the control of various missionary bodies, which are assisted by Government grants-in-aid.

The municipalities are required to expend a certain proportion of their ordinary income on education. They are mainly responsible for primary education within their jurisdiction, but schools in these areas are eligible also for grants from Government. These bodies maintain a second grade Arts College and a high school at Midnapore, a high school at Burdwan, a high school at Santipur and a high school at Chittagong.

There were on 31st Mar. '19 in the Presidency:--

Arts Colleges	36	Secondary Schools	2,813
Law	9	Primary Schools	44,925
Medical Colleges	2	Special	1,432
Engineering College	1	Private Institutions	2,478
Training Colleges	4		
Veterinary College	1		

with 19,31,535 pupils in all.

The Department is administered by a Director of Public Instruction, assisted by an Assistant Director and an Assistant Director for Muhammadan Education and a special officer in connection with Technical and Industrial Education. Each division is in charge of a Divisional Inspector assisted by a certain number of Additional and Assistant Inspectors according to the requirements of the several divisions. Similarly the administrative charge of the primary education of each district is in the hands of a Deputy Inspector assisted by Additional Deputy and Sub-Inspectors of Schools, the latter class officers being in some instances helped by officers of humbler status called Assistant Sub-Inspectors and Inspecting Pandits and Maulvis. Higher education is controlled by the University (Calcutta) established in 1857, administered by the Chancellor (the Governor-General and Viceroy of India), the Rector (the Governor of Bengal), the Vice-Chancellor (appointed by the Government of India, usually for two years at a time), and 110 Fellows, of whom 10 are ex-officio, 10 are elected by registered Graduates, 10 by the Faculties and the remainder 80 are nominated by the Chancellor. The University maintains a Law College, called the University Law College, Calcutta. The University is mainly an examining body, but it has now made itself responsible for the actual teaching of students, for which purpose it employs an agency which is quite distinct from the staffs of the affiliated colleges.

The following University Professorships have been founded:—(1) Prasanna Kumar Tagore Law Professorship, (2) Minto Professorship of Economics, (3) George V. Professorship of Mental and Moral Science, (4) Hardinge Professorship of Higher Mathematics, (5) Carmichael Professorship of Ancient Indian History and Culture, (6) Palit Professorships of Chemistry and Physics, (7) Sir Rash Behary Ghose Professorship of Applied Mathematics, Physics, Chemistry and Botany, (8) Two Professorships of English and (9) University Professorship of Comparative Philology.

The principal educational institutions are:—

GOVERNMENT ARTS COLLEGES.

Presidency College, Calcutta, Principal, W. C. Wordsworth on leave Mr. J. R. Barrow, officiating.

Dacca College, Principal, F. C. Turner.
Rajshahi College, Principal, Rai K. K. Banerji Bahadur on deputation to the Calcutta University—Dr. P. Veigy, Offg.

Chittagong College, Principal, J. R. Barrow, on deputation. Babu Purnachandra Kundu, officiating.

Sanskrit College, Principal, Dr. S. C. Acharya.

Hughli College, Principal, J. M. Bottomley.

Krishnagar College, Principal, R. N. Gilchrist.

Bethune College, Calcutta, Principal, Miss M. Wright.

PRIVATE ARTS COLLEGES.

Aided.

Scottish Churches College, Calcutta, Principal, Rev. J. Waitt.

St. Xavier's College, Calcutta, Rector, Rev. Father Fallon, S. T.

Jagannath College, Dacca, Principal, Rai L. M. Chatterji Bahadur.

Brajamohan College, Barisal, Principal, N. L. Mookherjee.

Anandamohan College, Mymensingh, Principal, Dr. J. Ghosh.

Victoria College, Comilla, Principal, Satyendra Nath Basu.

Wesleyan College, Bankura, Principal, Rev. A. E. Brown.

Victoria College, Narail, Principal, Gopal-chandra Maitra.

Hindu Academy, Daulatpur, Principal, Kama-khyacharan Nag.

Scramore College, Principal, The Rev. Dr. George Howells.

St. Paul's Cathedral Mission College, Calcutta Principal, The Rev. W. E. S. Holland.

Edward College, Pabna, Principal, R. Bose.

Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.J.S.B.

Unaided.

City College, Calcutta, Principal, Heramba Chandra Maitra.

Ripon College, Calcutta, Principal, Babu Janaki Nath Bhattacharjee.

Bangabasi College, Calcutta, Principal, G. C. Bose.

Vidyasagar College, Calcutta, Principal, Saradaranjan Roy.

Central College, Calcutta, Principal, Khudiram Bose.

Krishna Chandra College, Hetampur, Principal, Dhurumdas Dutt.

Burdwan Raj College, Principal, Umacharan Bandopadhyaya.

Uttarpara College, Principal, Jogendra Nath Mitra.

Krishnath College, Berhampore, Principal, S. Banerji (offg.)

Loreto House, Calcutta, Lady Principal, The Rev. Mother Mary Borgia, I.B.V.M.

Carmichael College, Rangpur, Principal, Rev. Dr. C. H. Watkins.

Rajendra College, Faridpur.

Bagerhat College, Khulna.

South Suburban College, Bhowanipur.

MUNICIPAL.

Midnapore College, Principal, Jogendra Nath Hazra.

COLLEGES FOR PROFESSIONAL TRAINING.

Engineering—Government.

Civil Engineering College, Sibpur, Principal B. Heaton.

Teaching—Government.

David Hare Training College, Principal, W. E. Griffith (on deputation). Babu Chinta Haran Chakravarti (offg.)
Babu Rakhal Raj Biswas in charge.
Dacca Training College, Principal, E. E. Biss (on deputation). Mr. H. A. Stark (offg.)

Unaided.

L. M. S. Training College, Bhowanipore (Calcutta), Rev. A. Sims.

Training Department attached to Loreto House, Calcutta.

Aided.

Diocesan College, Calcutta, Lady Principal, Sister Mary Victoria, C.I.I.B.

Medicine—Government.

Medical College, Calcutta, Principal, Lt.-Col. J. T. Calvert.

Law.

University Law College, Calcutta, Principal, Dr. Satis Chandra Bagchi.

The Law Department, attached to the Dacca College, Vice-Principal, Naresh Chandra Sen Gupta.

The Law Department, attached to the Ripon College, Calcutta, Principal, Jankinath Bhat-tacharji.

There are also Pleaderships classes attached to the Government Colleges at Dacca, Rajshahi, Hoogly, Chittagong and Krishnagar and in the unaided college at Berhampore, the Ripon College and the Metropolitan Institution, Calcutta, and the Municipal College at Midnapore.

Administration.**GOVERNOR AND PRESIDENT IN COUNCIL.**

His Excellency The Rt. Hon. Lawrence John Lumley Dundas, Earl of Ronaldshay, G.C.I.E.
Took his seat, 27th March 1917.

PERSONAL STAFF.

Private Secretary, H. R. Wilkinson, I.C.S.

Military Secretary, Major Henry George Vaux.

Surgeon, Major J. D. Sandes, I.M.S.

Aides-de-Camp, Capt. R. W. Hyde, Lt. Capt E. A. Haskett Smith.

Honorary Aides-Camp, Lt.-Col. R. Glen, V.D.; Lt.-Col. R. S. Hawkins, V.D.; Commander Duncan Frederick Vines, R. I. M.; Lt.-Col. D. A. Tyrie, V.D., Col. C. H. Shepherd.

Extra Aide-de-Camp, Lt. C. B. Lyon.

Indian Aide-de-Camp. Risaldar Major Hira Singh Bahadur, Raisaldar Faiz Mahamad Khan, Bahadur.

Commander of Body Guard, Major K. Robertson.

MEMBERS OF COUNCIL.

Sir Henry Wheeler, K.C.I.E., C.S.I., I.C.S. Took his seat on 9th April 1917.

Mr. John Ghest Cumming, C.S.I., C.I.E., I.C.S., 29th March 1918.

Sir Bijay Chand Mahtab, K.C.S.I., K.C.I.E., I.O.M. 14th May 1918.

Maharajahdiraja Bahadur of Burdwan (Temporary.)

Nominated, Officials.

Mr. James Donald,

„ J. H. Kerr, C.I.E.

Col. Joseph Kinnear close.

Mr. John Lang.

„ F. C. French, I.C.S.

„ Hubert Philip Diwal.

„ M.C. McAlpin.

„ Samuel Walker Goode, I.C.S.,

„ C. F. Payne, I.C.S.

„ James Donald, I.C.S.

Khan Bahadur Amin-ul-Islam.

Mr. T. O. Douglas Dunn.

„ F. A. A. Cowley.

Nominated Non-officials.

Nawab Sir Asif Qudr Saiyid Wasif Ali Mirza Khan Bahadur, K.C.V.O. of Murshidabad.

Sir Rajendra Nath Mukharji, K.C.I.E.

Mr. Richard Vyvyan Mansill, O.B.E.

Dr. Sir Nilratan Sarkar.

Raja Hrishikesh Laha, C.I.E.

Mr. Leslie Vere Nugent Meares.

„ W. H. Heton Arden Wood, C.I.E.

„ Aminur Rahman.

Elected.

Mr. Provash Chandra Mitter.

Babu Sib Narayan Mukharji.

Kumar Shib Shekhareswar Ray.

Babu Brajendra Kishor Ray Chaudhur

Babu Arun Chandra Singh.

Dr. Sir Deba Prosad Sarbadhikari.

Rai Radhacharan Pal Bahadur.

Mr. F. W. Carter, C.I.E.

„ A. R. Murray, O.B.E.

„ Rai Debendra Chandra Ghosh Bahadur.

„ George Anson Bayley.

„ H. R. A. Irwin.

Dr. Abdulla-al-Mamum, Suhrawardy.

Maulvi Abdul Kasem.

Maulvi Abdul Kasem Fazl-ul-Haq.

Mr. Ashrafali Khan Chaudhuri.

Khan Sahib Aman Ali.

Babu Bhabendra Chandra Ray.

Rai Mahendra Chandra Mitra.

Mr. Altaf Ali.

Rai Sri Nath Ray.

Babu Akhil Chandra Datta.

Babu Surendra Nath Ray.

Babu Mohendra Nath Ray.

Babu Kshirod Bihari Dutta.

Babu Kishori Mohan Chaudhuri.

Mr. Ambika Charan Mazumdar.

SECRETARIAT.

Chief Secretary to Government, J. H. Kerr, C.I.E.
 Secretary, Revenue Department, M. C. McAlpin.
 Secretary, General Department, L. S. S. O'Malley.
 Secretary, Financial Department, C. F. Payne.
 Acting Secretary to the Council and Secretary, Legislative Department, A. M. Hutchison.
 Secretary to Government, Public Works Department, and Chief Engineer, C. P. Walsh.
 Under Secretary to Government, Public Works Department (Civil Buildings Branch), G. A. Easson.

BOARD OF REVENUE.

Member Charles James Stevenson-Moore.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, W. W. Hornell.
 Principal, School of Arts, P. Brown.
 Inspector-General of Police, C. W. C. Plowden, C.I.E.
 Commissioner, Calcutta Police, Reginald Clarks (Offg.)
 Conservator of Forests, Sir Henry Anthony Farrington, Bart.
 Surgeon-General, W. H. B. Robinson, I.M.S.
 Sanitary Commissioner, Lieut.-Colonel W. W. Clemesha.
 Collector of Customs, Calcutta, C. W. E. Cotton, B.A., I.C.S.
 Commissioner of Excise and Salt, Satis Chandra Mukerji, I.C.S.
 Accountant-General, V. C. French.
 Inspector-General of Prisons, Lt.-Col. F. S. C. Thompson, I.M.S.
 Postmaster-General, John Reginald Trevor Booth, I.C.S.
 Inspector-General of Registration, Khan Bahadur Amin-ul-Islam.
 Director of Agriculture, S. Milligan.
 Protector of Emigrants, Lt.-Col. E. A. W. Hall.
 Sheriff, Prince Akram Hussain.

Superintendent, Royal Botanic Gardens, Lieut. Colonel A. T. Gage.

Coroner, F. K. Dobbin.

Registrar of Co-operative Credit Societies, J. M. Mitra.

LIEUTENANT-GOVERNORS OF BENGAL.

Frederick J. Halliday	..	..	..	1854
John P. Grant	..	..	..	1859
Cecil Beadon	..	..	..	1862
William Grey	..	..	..	1867
George Campbell	..	..	..	1871
Sir Richard Temple, Bart., K.C.S.I.	..	..	..	1874
The Hon. Ashley Eden, C.S.I.	..	..	..	1877
Sir Steuart C. Bayley, K.C.S.I. (Offg.)	..	..	..	1879
A. Rivers Thompson, C.S.I., C.I.E..	..	..	..	1882
H. A. Cockerell, C.S.I. (Officiating)	..	..	..	1885
Sir Steuart C. Bayley, K.C.S.I., C.I.E.	..	..	..	1887
Sir Charles Alfred Elliott, K.C.S.I.	..	..	..	1890
Sir A. P. MacDonnell, K.C.S.I., (Offg.)	..	..	..	1893
Sir Alexander Mackenzie, K.C.S.I.	..	..	..	1895
Retired 6th April 1898.				
Charles Cecil Stevens, C.S.I. (Officiating)	..	..	..	1897
Sir John Woodburn, K.C.S.I.	..	..	..	1898
Died, 21st Nov. 1902.				
J. A. Bourdillon, C.S.I. (Officiating)	..	..	..	1902
Sir A. H. Leith Fraser, K.C.S.I.	..	..	..	1903
Lancelot Hare, C.S.I., C.I.E. (Offg.)	..	..	..	1906
F. A. Slacke (Officiating)	..	..	..	1906
Sir E. N. Baker, K.C.S.I.	..	..	..	1908
Retired 21st Sept. 1911.				
F. W. Duke, C.S.I. (Officiating)	..	..	..	1911

The office of Lieutenant-Governor of Bengal was abolished on April 1st, 1912, when Bengal was raised to a Governorship.

GOVERNORS OF THE PRESIDENCY OF FORT WILLIAM IN BENGAL.

The Rt. Hon. Baron Carmichael of Skirling, G.C.I.E., K.C.M.G.	..	..	1912
The Rt. Hon. Earl of Ronaldshay, G.C.I.E.	..	..	1917

The United Provinces.

The United Provinces of Agra and Oudh lie in practically the centre of Upper India. They are bounded on the north by Tibet, on the north-east by Nepal, on the south and south-east by Bengal, on the south by two of the Chota Nagpur States of the Central India Agency and the Saugor District of the Central Provinces, and on the west by the States of Gwalior, Dholpur, Bharatpur, Sirmor, and Jubbal, and by the Punjab. Their total area amounts to 107,267 square miles, to which may be added the area of the two Native States of Tehri and Rampur, both of which lie within the United Provinces, 5,079 square miles and the newly-created independent State of Benares with an area of 865 miles, giving a total of 112,346 square miles. The total population is 48,014,080, out of which Tehri and Rampur account for 832,036.

The Provinces, originally termed the North-Western Provinces and so amalgamated in 1877, receiving their present designation in 1902, include four distinct tracts of country: portions of the Himalayas, the sub-Himalayan tracts (the Kumaon), the great Gangetic plain and portions of the hill systems of Central India (Bundelkhand). The first two of these tracts are infertile and support a very sparse population and the Central Indian plateau is almost equally infertile, though better populated. The soil of the Gangetic plain, however, possesses an extreme fertility and here the density of population rises from 512 persons per square mile in the west, to 549 in the centre and 718 in the east, which gives the Provinces as a whole a greater population pressure on the soil than any other Provinces in India. In the south there are low rocky hills, broken spurs of the Vindhyan mountains, covered with stunted trees and jungle, and in the North the lower slopes of the Himalayas, clothed with dense forest, affording excellent big and small game shooting, and rising beyond in a tangled mass of ridges, ever higher and higher, until is reached the line of the eternal snows, but the greater part of the provinces consists of level plain, teeming with highly-cultivated fields and watered by four rivers—the Ganges, Jumna, Gogra and the Gumti.

The People.

The population is mainly Hindu; 85 per cent. ranking as such whilst Mahomedans number 14 per cent., the total of all other religions being less than 0·6 per cent. composed of Christians (Europeans and Indians), Jains, Aryas and Sikhs; the Aryas are the followers of the Arya Samaj sect, which obtains widely in the Punjab and has extended its influence to the United Provinces. The three main physical types are Dravidian, Aryan and Mongoloid, the latter being confined to the Himalayan and sub-Himalayan districts and the former to South Mirzapur and Bundelkhand, whilst the high-caste Aryans frequent the western Districts of the Province. Most of the people, however, show mixed Arya-Dravidian origin. Three languages are spoken by the great majority of the people in the plains—Western Hindi, Eastern Hindi and Behari; Urdu, or Hindustani is a

dialect of Western Hindi, though it contains a large admixture of Persian and Arabic words, which makes it a *lingua franca*.

Industries.

The principal industry is agriculture, which supports no less than 71·7 of the population. The soils of the Provinces fall into three groups; the valley soils of the Himalayas, the main alluvium and the Central Indian alluvium; the chief characteristic soil of the Central Indian alluvium is the black soil, with a lighter variant, though here also there are light loams and gravel. The Himalayan soils are of local origin and vary with the nature of the rock from which they have been formed, whilst the main alluvium soils are sand, clay and loam, the loam being, naturally, the most productive. The soil generally yields excellent crops of rice, millet, maize, linseed, cotton, wheat, sugarcane, pulses, barley and poppy, rice being grown mostly in low-lying, heavy clays. The greater part of the Provinces is highly cultivated, the rainfall varies from 50 to 60 inches in the Hills, to 40 inches in the Benares and Gorakhpur Divisions, whilst the Agra Division receives about 25 to 30 inches annually only. Drought seriously affected Bundelkhand and the Agra Division, in the past, but improved drainage, and irrigation (a protective system of irrigation works exists and is being extended) have enabled a complete recovery to be made and the agricultural prosperity of the Provinces is now high, though it varies with the rainfall. The great scourge has been, and is, that of plague, which hampers the agriculturist severely, and in the Terai, malaria still exacts a large toll. Land is held mostly on the ryotwari tenure in Bundelkhand and Kumaon, on zemindari tenure in Agra and taluqdari tenure in Oudh. The principal land owners in Oudh are the Taluqdars, some of whom own very large estates. The area held in taluqdari tenure amounts to 51 per cent. of the total area in Oudh.

Manufactures.

The Provinces are not rich in minerals. Coal exists in Southern Mirzapur, iron and copper are found in the Himalayan Districts, and there were mines of importance there formerly, but increased difficulty of working them as veins became exhausted resulted in the closure of most of them. Gold is found in minute quantities by washing in some of the rivers in the Hills. Limestone is found in the Himalayas and stone is largely quarried in the Mirzapur District. Cotton is ginned and spun throughout the provinces, as a home industry, and weaving, by means of hand-looms, is carried on in most districts. In 1901 nearly a million persons were dependent on weaving, 140,000 on spinning and 136,000 on cleaning, pressing, and ginning, but during the last decade these industries have been on the decrease. The largest industry is in Azamgarh district, where there are 130,000 looms. Silk spinning is confined almost entirely to the district of Benares, where the famous *Kinkob* brocade is made. Em-

roidery is manufactured in Lucknow, where the noted *chikan* work of silk on cotton or muslin, is produced, and in Benares, where gold and silver work on velvet silk, crepe and sarsenet obtains. The glass industry is important in some districts, Benares and Moradabad are noted for their lacquered brass work, porcelain is manufactured at Ghazipur, and other industries are those of paper-making (Lucknow) dyeing, leather-work and fireworks. The chief centre of European and Indian industry is Cawnpore, which, situated in most advantageous position on the Ganges, possesses tanneries, cotton, woollen, jute and other mills, which have a large and ever increasing output (the woollen mill is the largest in India). There are cotton factories at Aligarh (famous for its locks), Meerut and Bareilly; Mirzapur (which produces also excellent carpets), Hardoi and Hathras have cotton mills. Excellent furniture is made at Bareilly, at Allahabad there are stone works, at Rosa there is a very large English distillery, with patent still, and the provinces can claim six breweries, with an out-turn of over a million gallons.

The largest trade centres are Cawnpore, Allahabad, Mirzapur, Benares, Lucknow, Meerut; Aligarh, Hathras, Muttra, Agra, Farukhabad, Moradabad, Chandausi, Bareilly, Saharanpur, Muzafarnagar, Ghaziabad, Khurja, Gorakhpur, Ghazipur, Pilibhit and Shahjahanpur.

Administration.

The Provinces are administered by a Lieutenant-Governor, who is generally chosen from among the members of the Indian Civil Service who have served in the Province. The medium for the transaction of public business is the Secretariat, the Staff of which consists of five Secretaries and five Under-Secretaries. The Chief Secretary is in charge of the Revenue, Appointment, General Administration, Political and Forest Departments; another Secretary attends to the Medical, Judicial, Police, Educational and Sanitation Departments; whilst a third looks to the local Self-Government, Financial, Municipal, Miscellaneous and Separate Revenue Departments. The other two Secretaries belong to the Public Works Department, and are also Chief Engineers, one of whom deals with Irrigation, and the other with Roads and Buildings. Government spends the cold weather, October to April, in Lucknow and Allahabad, mostly in Lucknow, the Secretariat moves between these two places. The Lieutenant-Governor and the Secretariat spend the hot weather in Naini Tal, but during the monsoon the Lieutenant-Governor tours the plains, as he does also in the cold weather. The Board of Revenue is the highest court of appeal in revenue and rent cases, and it has important executive duties, being the chief revenue authority in the Provinces. There are forty-eight British districts, thirty-six in Agra and twelve in Oudh, average area 2,000 square miles and average population a million. Each District is in charge of a District Officer, termed a Collector and Magistrate in Agra and a Deputy Commissioner and Magistrate in Oudh and Kumaon, who is an Indian Civilian. The Districts are grouped together in Divisions under a Commissioner. There are nine Divisions, having an average area of nearly 12,000 square miles and a population of from 5 to 6 millions.

The Districts are sub-divided into *tahsils*, of which there are 217, with an average area of 500 square miles and a population of 220,000. Each *Tahsil* is in charge of a *Tahsildar*, who is responsible for the collection of revenue, and also exercises judicial powers. *Tahsils* are divided into *parganas* which are units of importance in the settlement of land revenue. Subordinate to the *Tahsildars* are *kanungos*, of whom there are, on an average, three to a *tahsil*. These officials supervise the work of the *patwaris*, or village accountants, check their papers and form a link direct between the villagers and Government. For judicial purposes (revenue and criminal), the District Officer assigns a subdivision, consisting of one or more *tahsils*, as the case may be to each of his subordinates, who may be covenanted civilians, (Joint and Assistant Magistrates and Collectors) or members of the Provincial Service (Deputy Collectors and Magistrates). The Commissioner of the Bareilly and Kumaon Divisions are Political Agents for the Native States of Rampur and Tehri respectively and the Commissioner of Benares is the Political Agent for Benares State.

Justice.

Justice is administered by the High Court in the Province of Agra, and the Court of the Judicial Commissioner, in Oudh, which are the final appellate authorities in both criminal and civil cases. The former, which consists of a Chief Justice and five puisne Judges, two of whom are Indians, sits at Allahabad, and the latter, represented by a Judicial Commissioner and two Additional Commissioners, one of whom is an Indian, sits always in Lucknow. There are twenty-seven District and Additional District Judges, (Indian Civilians) twenty-one in Agra and six in Oudh, who have both original and appellate jurisdiction in civil and criminal cases, and occasional appellate jurisdiction in rent cases, but District Officers and their assistants, including *Tahsildars*, preside in both criminal and rent and revenue courts, and dispose of a good deal of the work. In Kumaon, the Commissioner is a High Court Judge in Civil cases, and a District Judge in Criminal cases. In the larger Cantonments, the Cantonment Magistrates have limited powers as Judges of a Small Cause Court. There are also Subordinate Judges, Judges of Small Cause Courts and Munsifs, who dispose of a large number of small civil suits, being specially empowered, in some cases, to decide suits up to Rs. 2,000, but generally they take cases up to Rs. 1,000, whilst Subordinate Judges hear cases up to Rs. 5,000. Appeals from Munsifs and Subordinate Judges go to the District Judges. Small Cause Court Judges try suits to the value of Rs. 500. There are also Honorary Munsifs, limited to Rs. 200 suits, and village Munsifs, whose jurisdiction is fixed at Rs. 20.

Local Government.

Local Government is exercised by means of District and Municipal Boards, the former levying local rates on land-owners; the latter deriving its revenue from octroi and other forms of taxation. The aim is to abolish octroi, because it interferes with through trade. Eighty-five Municipalities possess the privilege of electing their own members and all the principal Boards now have

non-official Chairman, with an Executive Officer who is directly responsible to the Board in all matters. Local self-government has been given a wider extension by the Municipalities Act, passed in 1916, under which the responsibilities of the boards and their chairmen have been largely increased. They deal with questions of sanitation, communication, lighting, town improvement, roads, water supply, drainage and education. Grants are made to Boards by Governments in some cases for special purposes from general revenues. Small towns, termed Act XX towns, also enjoy some measure of local self-government and it is under consideration to extend the principle here too.

Finance.

The Financial history of the Province has not been a happy one, inadequate settlements, *i.e.*, contracts between the Government of India and the local Government, and the severe famine in 1896 having caused Provincial bankruptcy, which for a long time necessitated rigid economy in order to accumulate reserves which could be spent on productive works. Recently liberal Imperial assignments have been made by the Government of India and the financial prospects are accordingly much brighter, though the war is naturally hampering progress. The local government gets 3-8 only of the land revenue. The Provincial Budget for 1919-20 shows an opening balance of 254 lakhs, revenue 1,376 lakhs, and expenditure 1,159 lakhs, and a closing balance of 206 lakhs.

Public Works.

The Public Works Department is divided into the Roads and Buildings branch and the Irrigation branch, each of which is administered by a Chief Engineer, who is also a Secretary to Government. The Provinces are divided into three circles and ten divisions for the administration of roads and buildings, and into four circles and twenty divisions for irrigation purposes. Each circle is in charge of a Superintending Engineer, and each division is in charge of an Executive Engineer. The whole of the irrigation works constructed or maintained by Government are in charge of the Department, nearly all metalled roads, and also bridges on second-class roads, and generally, all works costing more than Rs. 1,000, except in Municipalities. The most important irrigation works within the last twenty years have been the construction of the Betwa Canal, the Fatehpur branch of the Lower Ganges Canal, the Mat branch of the main Ganges Canal, improvements in the Rohilkhand and Terai Canals and extensive drainage operations in the Doab districts of the Meerut and Agra division. Important irrigation extension works are now being considered. The budget for irrigation and other public works for the present year is 175 lakhs.

Police.

The Police Force is divided into District and Railway Police and is administered by an Inspector-General, with five Deputies, one of whom is in charge of Railways, and two Assistants, forty-nine District Superintendents, two Railway Superintendents; and thirty As-

sistant Superintendents. There is a Police Training School at Moradabad. There is a local C. I. D. forming a separate detective department, under a Deputy Inspector-General, with an assistant. There is an armed police, specially recruited, and armed with the Martini Rifle. The present cost of the force is 133 lakhs. The administration of the Jail department is in charge of an Inspector-General of Prisons, who is a member of the Indian Medical Service.

Education.

Education is in part wholly State-maintained; and partly by means of grants-in-aid. There is a State University at Allahabad, a Government Sanskrit College at Benares, whilst Arabic and Persian are taught in special classes at the Muir College, Allahabad, which also has a special science side, which of late has been greatly extended, and there is a Government Engineering College at Roorkee (Thomason College). There are aided Colleges in Lucknow (Canning College), (Reid Christian College), and (Isabella Thoburn College), Agra (St. John's, Aligarh (the Mahomedan Oriental College), Gorakpur, Cawnpore and Meerut, and an unaided College at Benares, the Central Hindu College. In Lucknow there is the Martiniere school, an entirely independent institution, for European and Anglo-Indian children, and there is a Girls' Martiniere connected with it, whilst in the Hill-Stations, Naini-Tal and Mussoorie, there are many excellent private scholastic institutions for European boys and girls, which are attended by students from all over India. Government maintain Training Colleges, for teachers in Lucknow and Allahabad, an Art Crafts and an Industrial School in Lucknow, and an Agricultural College at Cawnpore. Public Schools are almost entirely maintained by the District and Municipal Boards and primary education is almost entirely in their hands. Primary and female education are in a very backward condition, though there was in 1915-16 an increase in pupils under both heads. Technical education is being pushed forward. The total number of schools of all kinds decreased by 170 to 17,631, but that of scholars rose from 832,454 to 841,334. The number of secondary public schools (high schools and middle schools, English and vernacular) for Indian boys rose from 594 to 611, while the number of scholars fell from 102,042 to 97,048. The decrease was wholly in vernacular schools. Students receiving collegiate education rose from 7,121 to 7,487: of these 5,443 were learning English, 3,369 a classical language and 280 a vernacular. The amount budgeted for education this year is 74 lakhs.

Higher education is controlled by the Allahabad University (constd. in 1887) which consists of a Chancellor, Vice-Chancellor and seventy-five ordinary and four *ex-officio* Fellows, of whom some are elected by the Senate or by registered graduates and the Faculties, and the remainder nominated by the Lieutenant-Governor, in his capacity of Chancellor. The Faculties are those of Art, Science, Law and Medicine, and the University possesses an important Law School. It is proposed to establish a Mahomedan University at Aligarh and a Hindu University has been inaugurated at Benares.

The principal educational institutions are :—
 The Mahomedan Anglo-Oriental College, Aligarh—Principal, J. H. Towle.
 The Central Hindu College, Benares—Principal, P. B. Adhikari, offg.
 St. John's College, Agra—Principal, Rev. A. W. Davies.
 Muir College, Allahabad—Principal, S. G. Jennings.
 Queen's College, Benares—Principal, P. S. Burrell.
 Canning College, Lucknow—Principal, M. B. Cameron.
 Agra College—Principal, T. Cuthbertson Jones.
 Reid Christian College, Lucknow—Principal, Rev. T. C. Badley.
 Meerut College—Principal, William Jesse.
 Woodstock College, Mussoorie—Principal, Rev. H. M. Andrews.
 Bareilly College—Principal, J. H. Alderson.
 Christian College, Allahabad—Principal, Rev. C. A. R. Janvier.
 Christ Church College, Cawnpore—Principal, Rev. M. S. Douglas.
 Isabella Thoburn College, Lucknow—Principal, Miss Robinson.
 Thomason College, Roorkee—Principal, Mr. W. G. Wood, C.S.I.
 King George's Medical College, Lucknow—Offg. Principal, Major J. W. D. Megaw, I.M.S.

Medical.

The Medical Department is in charge of an Inspector-General of Civil Hospitals. A Civil Surgeon is in charge and is responsible for the medical work of each district, and in a few of the larger stations he has an assistant. In two stations (Ranikhet and Almora) Medical Officers in military employ hold collateral civil charge. There are eighty-three Assistant Surgeons in charge of important dispensaries and a large number of Indian hospital assistants. Lady doctors and female hospital assistants visit *purda nashin* women in their own homes and much good work is done in this manner.

The best equipped hospitals, for Indian patients are the Thomason Hospital at Agra, King George's Hospital and the Balrampur Hospital at Lucknow. The Ramsay Hospital for Europeans at Naini Tal is a first class institution and there are also the Lady Dufferin Hospitals. King George's Medical College is one of the best equipped in the country, with a staff of highly efficient professors, and the hospital is the first in the Provinces. There is an X-Ray Institute at Dehra Dun, where valuable research work has been carried out and the Pasteur Institute at Kasauli take cases from all parts of India, and there are sanatoria for British soldiers in the Hills.

Administration.

Lieutenant-Governor, The Hon. Sir Spencer Harcourt Butler, K.C.S.I., C.I.E. Appointed 15th February 1918.

Private Secretary, Capt. Victor F. Gamble.
 Aid-de-Camp, Captain A. D. G. S. Batty.

LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

President, The Lieutenant-Governor.
 Vice-President, J. M. Holms, C.S.I.

Members.

Nawab Muhammad Muzammil-Ullah Khan, Khan Bahadur, of Bhikampur.
 Kunwar Aditya Narayan Singh of Benares.
 Frederick James Pert.
 Raja Sir Muhammad Tasadduk Rasul Khan, K.C.S.I.
 Nawab Mumtaz-ud-daula Sir Muhammad F. Ali Khan, K.C.I.E., K.C.V.O., C.S.I., of Pahasu.
 Frederick Alexander Leete.
 Percy Wyndham.
 E. A. H. Blunt.
 I. D. Elliott.
 Michael Keane, I.C.S.
 G. B. Lambert.
 Herbert Morton Willmott.
 F. F. Bion.
 Col. C. Mactaggart, C.I.E., I.M.S.
 E. A. Richardson.
 F. Mackinnon.
 H. R. C. Hailey.
 H. C. Ferard.
 W. E. Crawshaw.
 Rai Anand Sarup Bahadur.
 L. M. Kaye.
 C. M. King, I.C.S.
 Shaikh Shahid Hussain.
 Tara Dat Gairola.
 Pandit Jagat Narayan.
 Lala Madhusudan Dayal.
 Munshi N. P. Ashthana.
 Moti Lal Nehru.
 Rai Sadanand Pande Bahadur.
 Maharaja Sir Bhagwati Prasad Singh, K.C.I.E., of Balrampur.
 Raja Kushalpal Singh.
 Rai Asbthuja Prasad Bahadur
 Saiyid Raza Ali.
 Rai Janki Prasad Bahadur
 Radha Kishan Das.
 C. Y. Chintamani.
 Gokaran Nath Misra.
 Dr. Zia-ud-din Ahmed.
 Lala Sukbir Singh.
 Raja Chandra Chur Singh.
 Raja Moti Chand.
 Nawab Muhammad Abdul Majid.
 Percy Harrison.

Thomas Smith.

Saiyid Al-i-Nabi, Khan Bahadur.

Sayid Wazir Hasan.

SECRETARIAT.

Chief Secretary to Government, S. P. O'Donnell.

Financial Secretary to Government, G. G. Sim,
I.C.S.

Judicial " " M. Keane, I.C.S.

Secretary to Government, Public Works Dept.
(Buildings & Roads, & Railways), H. M.
Willmott.

Secretary to Government, Public Works Dept.
(Irrigation), A. W. E. Standley.

Registrars, F. E. Lowe, A. Grant, A. M. Jelly,
F. C. Richardson, C. St. L. Teyen, and F.
L. E. Phipps.

BOARD OF REVENUE.

Members, J. M. Holms, C.S.I., J. S. Campbell,
C.S.I., C.I.E.

MISCELLANEOUS APPOINTMENTS.

Opium Agent, Ghazipur, C. E. Wild.

Director of Land Records and Agriculture, H. R.
C. Hailey.

Chief Conservator of Forests, Herbert George
Billson.

Director of Public Instruction, C. F. de la Fosse.

Inspector-General of Police, W. S. Marris, *Sub.*
pro tem.

Inspector-General of Civil Hospitals, Col. C.
Mactaggart, M. A., M.B., C.I.E., I.M.S.

Sanitary Commissioner, Major Cuthbert Lindsay
Dunn.

Inspector-General of Registration, George Ban-
croft Lambert, I.C.S.

Commissioner of Excise, T. A. H. Way.

Accountant-General, John Stuart Milne.

Inspector-General of Prisons, Lt.-Col. J. M.
Woolley.

Postmaster-General, H. A. Sams, I.C.S. (on
leave). William Sutherland (*Officiating*).

Chemical Analyser, Dr. E. H. Hankin.

LIEUTENANT-GOVERNORS OF THE NORTH- WESTERN PROVINCES.

Sir C. T. Metcalfe, Bart., G.C.B. 1836

The Right Hon. the Governor-General 1838
in the North-Western Provinces (Lord
Auckland).

T. C. Robertson 1840

The Right Hon. the Governor-General 1842
in the North-Western Provinces (Lord
Ellenborough).

Sir G. R. Clerk, K.C.B. 1843

James Thomson. Died at Bareilly. .. 1843

A. W. Begbie, *In charge* 1853

J. R. Colvin. Died at Agra. 1853

E. A. Reade, *In charge* 1857

Colonel H. Fraser, C.B., Chief Commis- 1857
sioner, N.-W. Provinces.

The Right Hon. the Governor-General 1858
administering the N.-W. Provinces
(Viscount Canning).

Sir G. F. Edmonstone 1859

R. Money, *In charge* 1863

The Hon. Edmund Drummond 1863

Sir William Muir, K.C.S.I. 1868

Sir John Strachey, K.C.S.I. 1874

Sir George Couper, Bart., C.B. 1876

LIEUTENANT-GOVERNORS OF THE NORTH- WESTERN PROVINCES AND CHIEF COMMIS- SIONERS OF OUDH.

Sir George Couper, Bart, C.B., K.C.S.I. 1877

Sir Alfred Comyns Lyall, K.C.B. 1882

Sir Auckland Colvin, K.C.M.G., C.I.E. .. 1887

Sir Chas. H. T. Crosthwaite, K.C.S.I. .. 1892

Alan Cadell (*Officiating*) 1895

Sir Antony P. MacDonnell, K.C.S.I. (*a*) .. 1895

Sir J. J. D. La Touche, K.C.S.I. 1901

(*a*) Afterwards (by creation) Baron MacDonnell.

LIEUTENANT-GOVERNORS OF THE UNITED PROVINCES OF AGRA AND OUDH.

Sir J. J. D. La Touche, K.C.S.I. 1902

Sir J. P. Hewett, K.C.S.I., C.I.E. 1907

L. A. S. Porter, C.S.I. (*Officiating*) 1912

Sir J. S. Meston, K.C.S.I. 1912

Sir Harcourt Butler, K.C.S.I., C.I.E. .. 1918

The Punjab.

The Punjab, or land of the five rivers, is so called from the five rivers by which it is enclosed, namely, the Jhelum, Chenab, Ravi, Beas and Sutlej. Together with the North-West Frontier Province and the Native State of Jammu and Kashmir which lie to the north, the Punjab occupies the extreme north-western corner of the Indian Empire, and with the exception of the above-mentioned province comprises all of British India north of Sind and Rajputana and west of the river Jumna. Previous to October 1912, the Punjab with its feudatories embraced an area of 136,330 square miles and a population at the Census of 1911 of 24,187,750 (inclusive of 28,587 trans-frontier Baluchis) that is to say, about one-thirteenth of the area and population of the Indian Empire. But the formation of a separate province of Delhi reduced the area and population of the Punjab by about 450 square miles and 380,000 souls respectively. Of the total area of the Punjab, 36,551 square miles are in Native States (34 in number) with a population of 4,212,794, and 2,506 square miles are tribal territory on the western border of Dera Ghazi Khan district with a population of 28,587.

Physical Features.

The greater part of the Punjab consists of one vast alluvial plain, stretching from the Jumna in the east to the Suleman Range in the west. The north-east is occupied by a section of the Himalayas and the Salt Range forms its north-western angle. A few small spurs of the Aravalli mountain system traverse the extreme south-east and terminate in the Ridge at Delhi. The Punjab may be divided into five natural divisions. The Himalayan tract includes an area of 22,000 square miles, with a scanty population living scattered in tiny mountain hamlets. The Salt Range tract includes the districts of Attock, Rawalpindi and Jhelum and part of Shahpur district. Its physical configuration is broken and confused and the mountainous tracts of Murree and Kahuta approximate closely in characteristics to the Himalayan tract. Except in the hills, the rainfall leaves little margin for protection against distress in unfavourable seasons and irrigation is almost unknown. Skirting the base of the hills and including the low range of the Siwaliks, runs the narrow sub-montane tract. This tract, secure in an ample rainfall, and traversed by streams from the hills, comprises some of the most fertile and thickly populated portions of the province. Its population of over four millions is almost wholly agricultural and pastoral but it includes one large town in Sialkot. Of the plains of the Punjab, the eastern portion covers an area of some 36,000 square miles with a population of 10½ millions. East of Lahore, the rainfall is everywhere so far sufficient that cultivation is possible without irrigation in fairly favourable seasons, but over the greater part of the area the margin is so slight that, except where irrigation is employed, any material reduction in the rainfall involves distress, if not actual famine. Within the eastern plains lie the large cities of Lahore and Amritsar, and the population in comparison with the western Punjab

is largely urban. The western plains cover an area of 59,000 square miles, with a population of a little over six millions. The rainfall in this area, heaviest in the north and east and decreasing towards the west and south, is everywhere so scanty that cultivation is only possible with the aid of artificial irrigation or upon the low-lying river-banks left moist by the retreating floods. In this very circumstance, these tracts find their scarcity against famine, for there cultivation is almost independent of rain, a failure of which means nothing worse than a scarcity of grass. So little rain is sufficient, and absolute drought occurs so seldom that the crops may be said never to fail from this cause. The western plains embrace the great colony areas on the Lower Chenab and Lower Jhelum Canals which now challenge the title of the eastern plains as the most fertile, wealthy and populous portions of the province. Multan and Lyallpur are the largest towns in the western area. Owing to its geographical position, its scanty rainfall and cloudless skies, and perhaps to its wide expanse of untilled plains, the climate of the Punjab presents greater extremes of both heat and cold than any other portion of India. The summer, from April to September, is scorchingly hot, and in the winter, sharp frosts are common. But the bright sun and invigorating air make the climate of the Punjab in the cold weather almost ideal.

The People.

Of the population roughly one half is Mahomedan, three-eighths Hindu and one-eighth Sikh. Socially the landed classes stand high and of these the Jats, numbering nearly five millions, are the most important. Roughly speaking, one half the Jats are Mahomedan, one-third Sikh and one-sixth Hindu. In distribution they are ubiquitous and are equally divided over the five divisions of the province. Next in importance come the Rajputs, who number over a million and a half. The majority of them are Mahomedans by religion, about a fourth are Hindus and a very few Sikhs. They are widely distributed over the province. Both Jats and Rajputs of the Punjab provide many of the best recruits for the Indian Army. In fact all the agricultural classes of the Punjab, except in the south-western districts, made a magnificent response to the appeal for recruits in the great war and the province's contribution of upwards of 400,000 men to the main power of the Empire speaks for itself. The Gujars are an important agricultural and pastoral tribe, chiefly found in the eastern half of the province and in the extreme north-west. In organisation they closely resemble the Jats and are often absorbed into that tribe. There are many minor agricultural tribes, priestly and religious castes (Brahmans, Sayads and Kureshis), most of whom are landholders, the trading castes of the Hindus (Khatris, Aroras and Banias) and trading castes of the Mahomedans (Khojas, Parachas and Khakhas), and the numerous artisan and menial castes. There are also vagrant and criminal tribes, and foreign elements in the population are represented by the Baluchis of Dera Ghazi Khan and neighbouring

districts in the west, who number about half a million and maintain their tribal system, and the Pathans of the Attock and Mianwali districts. Pathans are also found scattered all over the province engaged in horse-dealing, labour and trade. A small Tibetan element is found in the Himalayan districts.

Languages.

The main language of the province is Punjabi, which is spoken by more than half the population. Western Punjabi may be classed as a separate language, sometimes called Lahndi, and is spoken in the north and west. The next most important languages are Western Hindi, which includes Hindustani, Urdu (the polished language of the towns) and other Hindi; Western Pahari, which is spoken in the hill tracts; and Rajasthani, the language of Rajputana. Baluchi, Pushto, Sindhi and Tibeto-Burman languages are used by small proportions of the population.

Agriculture.

Agriculture is the staple industry of the province, affording the main means of subsistence to 56 per cent. of the population. It is essentially a country of peasant proprietors. About one-sixth of the total area in British districts is Government property, the remaining five-sixths belonging to private owners. But a large part of the Government land is so situated that it cannot be brought under cultivation without extensive irrigation. Thus the Lower Chenab Canal irrigates nearly 1,900,000 acres of what was formerly waste land and the Lower Jhelum Canal, 390,000 acres, and the Lower Bari Doab Canal, when the colonisation scheme is completed, will add 1,200,000 acres to this total. Large areas in the hills and elsewhere which are unsuited to cultivation are preserved as forest lands, the total extent of which is about 8,700 square miles. Of the crops grown, wheat is the most important and the development of irrigation has led to a great expansion of the wheat area, which now occupies in an average year over 8½ millions of acres. The average annual outturn of wheat is 3,000,000 tons, valued at present prices at approximately £20,000,000. Next in importance to wheat is gram, the average annual produce of which is a million tons valued at £5,000,000. Other important staples are barley, rice, millets, maize, oilseeds (rape, toria and sesamum), cotton and sugarcane. Cotton is grown generally throughout the province but the ravages of boll-worm have affected the popularity of the crop. The cotton grown is of the short stapled variety, known as 'Bengals'. The country being preponderantly agricultural, a considerable proportion of the wealth of the people lies in its live-stock. The latest cattle census gives the following figures:—cattle, nearly 8,000,000 head; buffaloes, about 850,000; bovine young stock, 3,800,000; sheep, 4,500,000, goats, 4,250,000. Large profits are derived from the cattle and dairy trades and wool is a staple product in the south-west in Kulu and Kangra and throughout the plains generally. The production of hides and skins is also an important industry.

Industries.

The mineral wealth of the Punjab is small, rock salt, saltpetre, and limestone for road-

building being the most important products. There are some small coal mines in the Jhelum district, with an output of about 50,000 tons a year, and gold-washing is carried on in most of the rivers, not without remunerative results. Iron and copper ores are plentiful but difficulties of carriage and the absence of fuel have hitherto prevented smelting on a large scale. The Punjab is not a large manufacturing country, the total number of factories being only 184, the majority of which are devoted to cotton ginning, cleaning and pressing. Cotton weaving as a domestic industry is carried on by means of hand looms in nearly every village. The Salvation Army has shown considerable enterprise in improving the hand-weaving industry. Blankets and woollen rugs are also produced in considerable quantities and the carpets of Amritsar are famous. Silk-weaving is also carried on and the workers in gold, silver, brass, copper and earthenware are fairly numerous and ivory carving is carried on at Amritsar and Patiala. The trade of the province is steadily expanding, the total internal trade being valued at 65½ crores of rupees. The external trade with Afghanistan, Ladakh and Tibet is valued at 34 lakhs.

Administration.

The administrative functions of Government are performed by a Lieutenant-Governor, appointed by the Governor-General with the approval of the Crown. The Lieutenant-Governor in practice is always a member of the Indian Civil Service though military members of the Punjab Commission are eligible for the position. The Punjab Commission, the body which is responsible for the Civil administration of the province, is recruited from the Indian Civil Service and the Provincial Civil Service. Up to the date of the separation of the North-West Frontier Province from the Punjab, one-fourth of the cadre was drawn from the Indian Army. The business of Government is carried on through the usual Secretariat which consists of three Secretaries, designated (1) Chief, (2) Revenue and (3) Financial Secretaries, and three Under-Secretaries. There is also at present an Additional Secretary. In the Public Works Department, there are also three Secretaries (Chief Engineers), one in the Buildings and Roads Branch and two in the Irrigation Branch. The heads of the Police and Educational Departments are also Under-Secretaries to Government. The Government spends the winter in Lahore and the summer (from the middle of May to the middle of October) in Simla. The Lieutenant-Governor has no Executive Council, but is assisted in legislative business by a Legislative Council of 28 members, of whom 11 are elected and 17 nominated by the Lieutenant-Governor. Of the nominated members, not more than 11 may be officials, in addition there may be two nominated expert members. Under the Lieutenant-Governor, the province is administered by five Commissioners (for Ambala, Jullundur, Lahore, Rawalpindi and Multan) who exercise general control over the Deputy Commissioners—29 in number—each of whom is in charge of a district. A district on an average contains four tahsils, each consisting of about 300 villages. The Deputy Commissioner is usually a Covenanted Civilian

or military member of the Punjab Commission, although five Deputy Commissionerships are "listed" for Provincial Civil Servants. The Deputy Commissioner has under him one or more Assistant Commissioners (Covenanted Civilians) and one or more Extra Assistant Commissioners (Provincial Civilians). In some cases, one or more tahsils form a sub-division under the charge of a sub-divisional officer who has wide powers. The tahsil is in charge of a Tahsildar, in some cases assisted by one or more Naib Tahsildars. The village is under a Lambardar or headman and in most districts the villages are grouped into zails, each under a zaildar. The lambardars and zaildars are "village officers" and not Government-servants. The district Land Records and Excise staff, though organised for special departmental purposes, is available for general administrative work. The Native States of the province are arranged for the purposes of supervision into five groups, each under the charge of a Political Agent. Except in the case of the Sikh Phulkian States (Patiala, Jhind and Nabha) and the Bahawalpur Agency, the Political Agent is either the neighbouring Commissioner or Deputy Commissioner. The principal heads of Department in the province are the two Financial Commissioners (who are the highest Court of Revenue jurisdiction, and heads of the departments of Land and Separate Revenue and of Agriculture and the Court of Wards), the three Chief Engineers, the Inspector-General of Police, the Director of Public Instruction, the Inspector-General of Prisons, the Inspector-General of Civil Hospitals, the Sanitary Commissioner, the Conservator of Forests, the Director of Agriculture and Industries, the Inspector-General of Registration, the Registrar of Co-operative Credit Societies and Joint Stock Companies and the Legal Remembrancer. The Accountant-General, the Postmaster-General, the Director of Telegraph Engineering, and the Agent, North-Western Railway, represent Imperial Departments under the Government of India.

Justice.

The administration of justice is entrusted to a High Court, which is the final appellate authority in civil and criminal cases, and has powers of original criminal jurisdiction in cases where European British subjects are charged with serious offences and original civil jurisdiction in special cases. The Court sits at Lahore and is composed of a Chief Justice and six puisne judges (either Civilians or barristers), and an eighth additional judge. The Conversion of the old Chief Court into a High Court which had first been mooted as long ago as 1886 and was sanctioned by the Secretary of State in 1916, could not take effect until the war was over and was finally brought into force on April 1, 1919. Subordinate to the High Court are the District and Sessions Judge (22 in number) each of whom exercises civil and criminal jurisdiction in a civil and sessions division comprising one or more districts. They hear most of the first appeals in Civil suits and try sessions cases and hear criminal appeals from the district and first class magistrates. One or two divisions have an additional judge and in many districts a Subordinate Judge exercising unlimited civil jurisdiction, is ap-

pointed to assist the District Judge but the majority of civil suits are tried in the first instance by Munsifs whose jurisdiction is limited to suits not exceeding Rs. 1,000 in value. The assistants to Deputy Commissioners are always invested with the powers of a Munsif, but the former practice of investing Tahsildars with Munsif's powers is being gradually discontinued. At Lahore, Amritsar and Simla there are Courts of Small Causes. The Deputy Commissioner is the District Magistrate and controls the subordinate Criminal Courts of the District. All the assistants of the Deputy Commissioner as well as the District and Subordinate Judges, but not the Munsifs, are invested with magisterial powers. Tahsildars usually exercise the powers of a second class magistrate and Naib Tahsildars those of the third class, and considerable assistance is obtained from Honorary Magistrates who sit either singly or as a bench. In districts in which the Frontier Crimes Regulation is in force the Deputy Commissioner on the finding of a Council of Elder (Jirga) may pass sentence up to four years imprisonment. In all cases capital sentences require the confirmation of the Chief Court. Special Revenue Courts to decide all suits regarding tenant right, rents and cognate matters in which civil courts have no jurisdiction have been established under the Punjab Tenancy Act. The Financial Commissioners are the final court of appeal in revenue cases.

Local Government.

Local control over certain branches of the administration is secured by the constitution of district boards exercising authority over a district and of municipalities exercising authority over a city or town. A few districts have local boards which exercise authority over a tahsil. These bodies are composed of members either nominated by Government or elected by the people and they are empowered to spend the funds at their disposal on schools and dispensaries, vaccination, sanitation, roads and rest houses and general improvements. The funds of district boards are derived mainly from a cess on the land revenue of the district supplemented by grants from Provincial Funds, and those of municipalities from octroi, local taxation and Government grants. In the smaller towns which are known as "notified areas", a simpler form of government than the municipal system is in force. Where the elective principle is in force as regards both district boards and municipalities, the public shows very little interest in the elections, except in a few cases where sectarian feeling runs high.

Finance.

Under the present system of decentralisation in finance, the Imperial Government delegates to the Punjab Government the control of expenditure on the ordinary administrative services together with the whole or a certain proportion of certain heads of revenue sufficient to meet those charges. Of the various heads of revenue post office, telegraphs, railways, opium and salt are entirely Imperial. Land revenue, stamps, excise, income-tax and major irrigation works are divided between the Imperial and Provincial Govern-

ments in the proportion of one half to each. Minor irrigation works and some minor heads are divided in varying proportions while the revenue from forests, registration, courts of law, jails, police and education are wholly provincial as well as the income of district boards and municipalities. The Budget for 1919-20 shows an opening balance of Rs. 2,23,35,100, a total revenue of Rs. 5,88,50,000, and a total expenditure of Rs. 6,02,28,000 leaving a closing balance of Rs. 2,09,57,000.

Public Works.

As was stated in the section on "Administration" the Public Works Department is divided into two branches, one for Buildings and Roads and the other for Irrigation. In the former branch, under the Chief Engineer, the province is divided into three circles under Superintending Engineers and 11 divisions under Executive Engineers. The primary object of this branch is the construction and maintenance of Imperial and Provincial works, but it also assists municipalities and district boards. The Irrigation branch is under two Chief Engineers, one of whom is also Chief Engineer of Irrigation Works in the North-West Frontier Province. Under them are nine Superintending Engineers in charge of circles and 39 Executive Engineers in charge of divisions. In addition to the work of construction and maintenance Irrigation Officers are responsible for the assessment of water rates leviable on irrigated areas and in several districts where the land revenue demand is assessed on the fluctuating principle, for the formulation of this demand on irrigated crops as well.

Irrigation.

The canal system of the Punjab is admittedly one of the greatest achievements of British rule in India. Not including the enormous Triple Canal project recently completed, the total irrigated area in British districts and Native States amounts to 8,269,233 acres. The Beas is the only one of the great rivers of the province from which no canal takes off. The Indus provides supplies for two large series of inundation canals, one on either bank. Taking off from the Jhelum is the Lower Jhelum perennial canal, with 150 miles of main channel and 1,000 miles of distributaries and lower down the river is a large series of inundation canals. The Lower Chenab perennial canal takes off from the Chenab and comprises 427 miles of main channel and branches and 2,278 miles of branches, while below the junction of the Chenab and Ravi rivers is a series of inundation canals on both banks. The Ravi provides supplies for the Upper Bari Doab Canal, which has 370 miles of main line and branches and 1,571 miles of distributaries. Some small inundation canals and the Sidhani system with a length of 200 miles also take off from the Ravi. The Sirhind Canal, which has a main line and branches of 538 miles and distributaries amounting to 3,703 miles, takes off from the Sutlej, and there are two systems of inundation canals deriving their supplies from the Upper and Lower Sutlej respectively in addition to the Grey Canals maintained on the co-operative system in the Ferozepore district and a vast

series of inundation canals in Bahawalpur State. The Western Jumna Canal, which takes off from the right bank of the Jumna, has a main line and branches of 377 miles and distributaries of 1,764 miles. The Triple Canal project is intended to carry surplus water from the Jhelum and the Chenab to supplement the scanty supplies in the lower reaches of the Ravi and incidentally to afford irrigation to the tracts through which the supply channels pass. The three canals included in the scheme are known as the Upper Jhelum, Upper Chenab and Lower Bari Doab Canals. Of these the Upper Chenab was opened in April 1912 and the Lower Bari Doab in April 1913 and the Upper Jhelum in December 1915. The most interesting feature of this great work is the level crossing at Balloki, 40 miles from Lahore, where the Upper Chenab canal supply is passed across the Ravi into the Lower Bari Doab Canal. The revised estimate of the cost of the whole scheme is £6½ millions. The scheme is expected to serve an area of 1,370,000 acres annually.

Police.

The Police force is divided into District and Railway Police. The combined force is under the control of the Inspector-General, who is a member of the gazetted force and has under him three Deputy Inspectors-General, and a fourth Deputy Inspector-General in charge of Criminal Investigation, the Police Training School and Finger Print Bureau at Phillaur. The Railway Police are divided into two districts, Northern and Southern, under an Assistant Inspector-General. The District Police are controlled by Superintendents, each of whom is in charge of a district, and has under him one or more Assistant Superintendents. The district is divided into circles under charge of Inspectors, and again into thanas in charge of a Sub-Inspector. The staff of a thana consists on an average of one Sub-Inspector, two head constables and 10 constables. A service of Provincial Police officers has also been established consisting of 18 Deputy Superintendents, who are employed as assistants to the Superintendents. The total police force of the province exclusive of gazetted officers, consists of 980 officers and about 20,000 men, practically half of whom are armed with revolvers and bored out rifles. The village police or chaukidars are under the control of the Deputy Commissioner of each district not of the Police Superintendent. The cost of the Police Force is 62½ lakhs.

Education.

Although the Punjab is usually considered rather a backward province, education has made great strides especially in the last ten years. Government maintain the Government College at Lahore, the Central Training College at Lahore, a Training Class for European teachers at Sanawar (Simla Hills), normal schools at the headquarters of each division, and High Schools at the headquarters of each district, and the Lawrence Military Asylum at Sanawar for European children. Two more Government Colleges, at Ambala and Multan are in contemplation. There are in the province nine arts colleges (one of them Oriental). 6 professional colleges

or males and 1 for females; 130 High schools for boys and 18 for girls; 241 middle schools for boys and 43 for girls; 6,492 Primary Schools for boys and 855 for girls; 54 schools for special instruction for boys and 2 for girls. The number of pupils attending schools of all classes, both male and female, is 63,154. The nine arts colleges are:—The Government, Oriental, Forman Christian, Dayanand, Islamia and Dayal Singh Colleges at Lahore; Khalsa, Amritsar; Murray, Sialkote; Gordon, Rawalpindi. Professional education is represented by the Law, Medical and Veterinary Colleges at Lahore, the Agricultural College at Lyallpur, the Clerical and Commercial School at Amritsar, the Engineering School at Rasul, the Mayo School of Art and the Railway Technical School, both at Lahore. There are eight Industrial Schools in the Province maintained by Municipalities or District Boards and others maintained by Missionary bodies, the Arya Samaj, etc., which receive grants-in-aid. The education of the domiciled community is provided for by a number of secondary boarding schools in hill stations and of primary schools in the plains. The aristocracy of the province is provided for by the Aitchison Chiefs' College for boys and the Queen Mary's College for girls, both at Lahore.

The Education Department is administered by the Director of Public Instruction, who has under him an Inspector of Schools in each civil division an Assistant Director, with two or more assistants, a District Inspector, with assistants, in each district, two Inspectresses of girls' schools and an Inspector of European schools. Higher education is controlled by the Punjab University (incorporated in 1882) which has the Lieutenant-Governor as *ex-officio* Chancellor, a Vice-Chancellor appointed by Government and a Senate. In addition to the nine arts colleges already mentioned and the Law and Medical Colleges at Lahore, St. Stephen's College, Delhi, and the Hindu College, Delhi, and six other colleges in Kashmir, Patiala, Bahawalpur, Kapurthala and the North-West Frontier Province are affiliated to the Punjab University.

Medical.

The Medical Department is controlled by the Inspector-General of Civil Hospitals (a member of the Indian Medical Service) who also supervises the departments of the Chief Plague Medical Officer and the Chief Malaria Medical Officer. Sanitation is controlled by the Sanitary Commissioner (also a member of the Indian Medical Service) who has under him two Deputy Sanitary Commissioners and is advised by the Sanitary Board, with the Sanitary Engineer as Technical Adviser. Medical work in the districts is in charge of the Civil Surgeons, of whom fourteen before the War were members of the Indian Medical Service and others Military Assistant Surgeons and uncovenanted Medical Officers, chiefly Civil Assistant Surgeons. The Mayo Hospital at Lahore and special railway, canal and police hospitals are maintained by Government, but the ordinary hospitals and dispensaries in the districts are maintained by municipal or district funds. Certain private institutions such as

the Walker Hospital at Simla and many mission dispensaries receive grants-in-aid. The Mayo Hospital at Lahore has been greatly extended and improved as a memorial to King Edward VII, and was formally opened by Lord Hardinge in December 1915. The total number of patients treated at all hospitals and dispensaries in the year is over four and a half millions, including nearly 75,000 in-patients. A temporary department to combat plague has been organised under the Chief Medical Plague Officer. In the districts the Civil Surgeons are generally in charge of the operations against plague, but additional officers are employed from time to time. There is only one lunatic asylum in the Province at Lahore, but there are ten leper asylums. The Pasteur Institute at Kasauli performs the functions of a provincial laboratory for the Punjab. Vaccination is supervised by the Sanitary Commissioner, but is more particularly the concern of the Deputy Sanitary Commissioner, who has under him a special staff. Civil Surgeons also have a local staff of vaccinators under them.

Administration.

Lieutenant-Governor, Sir Edward Maclagan, K.C.I.E., C.S.I., I.C.S.

PERSONAL STAFF.

Private Secretary, Lieut.-Col. E. C. Bayley, C.I.E., O.B.E., I.A.

Honorary Aides-de-Camp, Lieut. Col. W. T. Wright, Subedar-Major Feroz Khan Bahadur, and Subedar Sainbir Gurung, Bahadur, I.O.M.

LEGISLATIVE COUNCIL.

President, The Lieutenant-Governor.

MEMBERS.

Nominated.

H. J. Maynard, C.S.I., I.C.S.

T. P. Ellis, I.C.S., O.B.E.

F. W. Woods.

J. A. Richey.

E. A. A. Joseph, I.C.S.

C. A. H. Townsend, I.C.S.

C. J. Hallifax, C.B.E., I.C.S.

Col. R. C. MacWatt.

Sardar Bahadur Gajjan Singh

Khwajah Yusuf Shah, Khan Bahadur.

Rai Bahadur Ram Saran Das, C.I.E.

Rai Bahadur Pandit Sheo Narayan.

Nawab Sir Bahram Khan.

E. W. Parker.

Sardar Gopal Singh.

B. T. Gibson, I. C. S.

Elected.

F. C. Waller.

Lala Jowahar Lal Bhargava.

Raizada Bhagat Ram.

Sayad Makhdum Rajan Shah.

Dewan Bahadur Dewan Daulat Rai.

Bakhshi Sohan Lal of Lahore.
 Malik Muhammad Amin Khan of Shamsabad.
 Chaudhri Lal Chand.
 Khan Saheb Mirza Ikram Ullah Khan.
 Khan Bahadur Sayad Mehdi Shah.
 Khan Bahadur Mian Fazl-i-Husain.

SECRETARIAT.

Chief Secretary, J. P. Thompson, I.C.S.
 Revenue Secretary, E. A. A. Joseph, I.C.S.
 Financial Secretary, B. T. Gibson, I.C.S.
 Registrar, Percy Wood-Collins.

PUBLIC WORKS DEPARTMENT.

Irrigation Branch.

Secretaries, F. W. Woods; W. F. Holms.

Buildings and Roads Branch.

Secretary, A. S. Montgomery.

REVENUE DEPARTMENT.

Financial Commissioners, H. J. Maynard,
 I.C.S., and P. J. Fagan, I.C.S.

Director of Agriculture and Industries, C. A.
 H. Townsend, B.A., I.C.S.

Director of Land Records, Inspector-Genl. of
 Registration, and Registrar-General, D. J. Boyd.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, James Alexander
 Richey, M.A.

Inspector-General of Police, A. C. Stewart.

Inspector-General of Registration Shaikh Rahim
 Bakhsh.

Conservator of Forests, Richard McIntosh
 (on leave); William Mayes (Officiating).

Inspector General of Civil Hospitals and Sanitary
 Commissioner, Colonel Robert Charles Macwatt,
 C.I.E., I.M.S.

Inspector General of Prisons, Lt.-Col. E. L.
 Ward.

Accountant-General, F. D. Gordon, M.A.

Postmaster-General, Philip Graham Rogers, I.C.S.

LIEUTENANT GOVERNORS OF THE PUNJAB.

Sir John Lawrence, Bart., G.C.B. 1859

Sir Robert Montgomery, K.C.B. 1859

Donald Friell McLeod, C.B. 1865

Major-General Sir Henry Durand, 1870
 K.C.S.I., C.B., died at Tonk, January 1871.

R. H. Davies, C.S.I. 1871

R. E. Egerton, C.S.I. 1877

Sir Charles U. Aitchison, K.C.S.I., 1882
 C.I.E.

James Broadwood Lyall 1887

Sir Dennis Fitzpatrick, K.C.S.I. 1892

William Mackworth Young, C.S.I. 1897

Sir C. M. Rivaz, K.C.S.I. 1902

Sir D. C. J. Ibbetson, K.C.S.I., resigned 1907
 22nd January 1908.

T. G. Walker, C.S.I. (offg.) 1907

Sir Louis W. Dane, K.C.I.E., C.S.I. 1908

James McCrone Douie (offg.) 1911

Sir M. F. O'Dwyer, K.C.S.I. 1913

Sir Edward Maclagan, K.C.I.E., C.S.I. 1918

Burma.

The Province of Burma lies between Assam on the North-West and China on the North-East, and between the Bay of Bengal on the West and South-West and Siam on the South-East. Its area, including the district of Putao constituted in February 1914, is approximately 270,000 square miles, of which 172,000 are under direct British Administration, 31,000 belong to independent and 67,000 to semi-independent Native States. The main geographical feature of the country is the series of rivers and hills running fan-like from North to South with fertile valleys in between, widening and flattening out as they approach the Delta. Differences of elevation and rainfall produce great variations in climate. The coastal tracts of Arakan and Tenassein have a rainfall of about 200 inches, the Delta less than half that amount. The hot season is short and the monsoon breaks early. The maximum shade temperature is about 96°, the minimum about 60°. North of the Delta the rainfall decreases rapidly to 30 inches in the central dry zone which lies in a "rain shadow" and has a climate resembling that of Bihar. The maximum temperature is twenty degrees higher than in the wet zone, but this is compensated by a bracing cold season. To the north and east of the dry zone lie the Kachin hills and the Shan plateau. The average elevation of this tableland is 3,000 feet with peaks rising to 9,000. Consequently it enjoys a temperate climate with a rainfall of about 70 inches on the average. Its area is over 50,000 square miles. There is no other region of similar area in the Indian Empire so well adapted for European colonization. The magnificent rivers, the number of hilly ranges (Yomas) and the abundance of forests, all combine to make the scenery of Burma exceedingly varied and picturesque.

The People.

The total population of Burma at the census of 1911 was 12,115,217. Of this total, 7,642,204 are Burmans, 996,420 Shans, 919,641 Karens, 239,953 Kachins, 306,486 Chins, 344,123 Arakanese and 320,629 Talaings. There is also a large alien population of 108,877 Chinese and about 600,000 Indians, while the European population is 24,355.

The Burmans, who form the bulk of the population, belong to the Tibetan group and their language to the Tibeto-Chinese family. They are essentially an agricultural people, 80 per cent. of the agriculture of the country being in their hands. The Burmese, and most of the hill tribes also, profess Buddhism, but Animism, or the worship of nature spirits, is almost universal. The interest taken by the Burmese in the course of the war, their response to the call for recruits and their generous contributions to war loans and charitable funds seem to show that their apathy towards the government of the country is giving way to an intelligent loyalty to British rule. But attempts are being made by the Indian Reform party to exploit this newly awakened interest in politics. In appearance the Burman is usually somewhat short and thick set with Mongolian features. His dress is most distinctive and

exceedingly comfortable. It consists of a silk handkerchief bound round his forehead, a loose jacket on his body and a long skirt or loongi tied round his waist, reaching to his ankles. The Burman women, perhaps the most pleasing type of womanhood in the East, lead a free and open life, playing a large part in the household economy and in petty trading. Their dress is somewhat similar to the man's minus the silk kerchief on the head, and the loongyi is tucked in at the side instead of being tied in front. A well dressed and well groomed Burmese lady would, for grace and neatness, challenge comparison with any woman in the world.

Communications.

The Irrawaddy, and to a less extent the Chindwin, afford great natural thoroughfares to the country. At all seasons of the year these rivers, especially the Irrawaddy, are full of sailing and steam craft. In the Delta the net-work of waterways is indeed practically the only means of communication. The Irrawaddy Flotilla Company, with a fine fleet of mail, cargo and ferry boats, gives the Irrawaddy and the Delta rivers and creeks a splendid river service.

The Burma Railways Company has a length of 1,600 miles open line. The principal lines are from Rangoon to Mandalay; from Sagaing to Myitkyina, the most northern point in the system; the Rangoon-Prome line; and the Pegu-Martaban line, which serves Moulmein on the further bank of the Salween River. An important branch line runs from Thazi on the main line across the Meiktila and Myingyan Districts to Myingyan Town on the Irrawaddy. Another branch goes from Sagaing on the Irrawaddy to Alon on the Chindwin. A small branch on the Sagaing-Myitkyina line runs from Naba to Katha on the Irrawaddy. A branch on the right bank of the Irrawaddy runs from Bassein to Kyangin. A ferry at Henzada connects this branch with another branch running from Letpadan on the Prome line to the left bank of the Irrawaddy at Tharawaw. An important line, the Southern Shan States Railway, is open as far as Aungban, 7 miles beyond Kalaw, the future hill-station of the province, and 70 miles from Thazi, the junction with the Rangoon-Mandalay main line. The new line will end thirty miles further east at Yawngnwe, the principal town in the rich valley of the Nam Piliu. The Northern Shan States railway runs from Myohaung Junction, 3 miles south of Mandalay, to Lashio.

The length of metalled roads is nearly 2,000 miles and of unmetalled roads nearly 11,000. The number of roads is for a rich province like Burma quite inadequate. One of the most urgent needs of the Province is a very generous extension of roads both metalled and unmetalled. The newly-constituted Committee on Roads and Communications will no doubt effect rapid improvement when funds become available. The imperial grant of 50 lakhs spread over four or five years went a very little way towards making good deficiencies, and the proposal to provide funds by means of a tax on rice exports was not approved.

A revision of the Provincial settlement is urgently required. No arrangement can be satisfactory which does not recognize the claim of Burma, as a new and undeveloped country, to separate treatment. She is taxed far more highly than any other province and her surplus should be used to a far greater extent than hitherto for capital expenditure on development, and not swept into the Imperial coffers.

Industry.

Agriculture is the chief industry of the province and supports nearly three-fourths of the population. The nett total cropped area is $14\frac{1}{2}$ million acres of which more than half a million acres are cropped twice. Irrigation works supply water to $1\frac{1}{4}$ million acres. The main crop is paddy, of which some seven million tons are produced, and two and three quarter million tons of rice are available for export. In 1915-16 the actual exports were lower than in any of the previous nine years except 1911-12, and the price realized six crores of rupees below the figure for 1913-14. In 1918-19, thanks to extensive buying for Europe on account of the Royal Commission on Wheat Supplies the total export was just less than $2\frac{1}{2}$ million tons of rice valued at over 24 crores. This was an increase of 400,000 tons over the figures of the previous year and nearly 300,000 tons over the average of the previous four years. The value was $5\frac{1}{2}$ crores more than in the previous year and $3\frac{1}{2}$ crores more than the average of the previous four years. India took 845,000 tons valued at 8½ lakhs. India took nearly half the export. Rice forms 54 per cent. of the total exports. Over 9,000 tons of cotton are produced, 101,000 tons of groundnuts, and 80,000 tons of sesamum Maize (35,000 tons) and white beans 140,000 tons are the other chief crops.

Forests play an important part in the industrial life of the Province. The forest reserves cover nearly 30,000 square miles, while unclassified forests are estimated at about 110,000 square miles. Government extracts some 90,000 tons of teak annually, private firms, of whom the Bombay Burma Trading Corporation and Steel Brothers are the chief, extract over 276,000 tons. Other timber extracted by licensees amounts to nearly 400,000 tons and firewood 700,000 tons. The gross revenue from forests is 127 lakhs of rupees, the net revenue 74 lakhs.

The war has given a great impetus to the exploitation of the mineral resources of the country and there has been a rapid increase in the number of mines. Wolfram and tin mines in Tenasserim have especially developed. Government has aided their development by the appointment of special officers, the importation of labour and the construction of roads. In 1918 wolfram was extracted to the amount of 4,442 tons valued at over a crore of rupees. Burma is the chief source of the world's supply of this important mineral. In the same year 100 tons of block tin and 732 tons of tin ore were produced. The value was nearly eighteen lakhs. Silver, lead and zinc are extracted by the Burma Mines Company at Badwin in the Northern Shan States. Copper in small quantities is also found there. The returns for 1918

show that lead worth $67\frac{1}{2}$ lakhs and silver worth 44½ lakhs were obtained. No zinc has been won since 1916. There are small deposits of Molybdenite in Tavoy and Mergui and of platinum in Myitkyina. Antimony is found in large quantities in Amherst district in an area at present too difficult of access for profitable working. The output of precious stones from the ruby mines had declined since the war began, but the stones won in 1918 were worth over six lakhs. Gold dredging in the Myitkyina District has proved unprofitable and the company has been wound up. From the mines in the Hukong valley jade and amber worth nearly four lakhs were won. Next in importance for war purposes to wolfram and far exceeding it in commercial value is petroleum. The oldest and largest oil field in the province is at Yenangyaung in Magwe district where the Burma Oil Company has its chief wells. But borings in other districts have shown that the oil-bearing strata extend over the whole of the dry zone, and the output from the smaller fields in Myingyan, Pakokku and Minbu districts is now considerable, while the wells sunk in Thayetmyo and Prome districts are also showing satisfactory returns. The output in 1918 was 275 million gallons worth Rs. 162 lakhs. Two-thirds of the total production comes from the Yenangyaung field, whence it is carried 300 miles in pipes to the oil refineries at Syrian on the Rangoon river. The revenue from minerals for the year was Rs. 419 lakhs.

The area under rubber is 60,000 acres. The plantations are young and as the trees come into bearing production increases rapidly. The exports of rubber in 1918 reached 1,852 tons worth Rs. 47 lakhs. But the planting of new ground is not on a scale to meet the demands for rubber, and Government has endeavoured by free grants of suitable land to stimulate planting. On this as on other industries of Burma the mischievous activities of the company promoter during the great "boom" cast a blight from which it is only just recovering. The bulk of the rubber is grown in Tenasserim division, but there are large plantations near Rangoon and in the wet zone of Upper Burma near Myitkyina.

Manufactures.

There are 536 factories, over three-fifths of which are engaged in milling rice and over one-fifth are sawmills. The remainder are chiefly cotton ginning mills, oil mills for the extraction of oil from groundnuts, and oil refineries connected with the petroleum industry. The average daily number of operatives is under 70,000. At the Census of 1911, 469,743 or only 6·6 of the total population were engaged outside agriculture and production.

As is the case in other parts of the Indian Empire, the imported and factory-made article is rapidly ousting the home-made and indigenous. But at Amarapura in the Mandalay District a revival has taken place, of hand silk-weaving. Burmese wood-carving is still famous and many artists in silver still remain, the finish of whose work is sometimes very fine. Bassein and Mandalay parasols are well known and much

admired in Burma. But perhaps the most famous of all hand-made and indigenous industries is the lacquer work of Pagan with its delicate patterns in black, green and yellow traced on a ground-work of red lacquer over bamboo. A new art is the making of bronze figures. The artists have gone back to nature for their models, breaking away from the conventionalized forms into which their silver work had crystallized, and the new figures display a vigour and life that make them by far the finest examples of art the province can produce.

Trade.

The total value of the foreign trade in 1918-19 was 3,565 lakhs, an increase of 15 per cent. compared with the previous year but 424 lakhs below the returns for the best year before the war. Imports amounted to 1,059 lakhs or 7 per cent. more than in the previous year. Rangoon, the only port with facilities for distribution, took 85.74 per cent. of the foreign trade and 93.43 of the Indian trade. Indian trade rose from 2,340 lakhs in 1917-18 to 3,354 lakhs in 1918-19. The net customs duty was 191½ lakhs or 15½ lakhs more than in 1917-18. The shortage of shipping and the enormous cost of freight continued to hamper trade. Articles of export required for war purposes, such as wolfram, rubber and cotton, with hides, timber, tobacco and oil, shew the chief increases. The exports of rice and paddy to foreign countries totalled 1,642,067 tons, or 8 per cent. more than in 1917-18, but still 14 per cent. below the returns for the best year before the war. Increase of prices accounts for a considerable part of the increase of total trade, but after allowances have been made for the inflation of prices it is clear that there was a great recovery during the year.

The most important item of merchandise imported into Rangoon is manufactured cotton, which accounts for 27 per cent. of the total import trade. These imports are valued at Rs. 266 lakhs. In 1918-19 the United Kingdom took 36.8 per cent. and the rest of the British Empire 26.7 per cent. of the total foreign trade of the province. Japan stands next with 17 per cent., nearly four times as much as her nearest competitor, the United States. Of the import trade alone Japan takes 23 per cent., United Kingdom 48.8 per cent., British Dominions 16 per cent., the whole of Europe 2 per cent. Japan has nearly doubled her total trade in the twelve months and imports alone from Japan are two and a quarter times as much as the average of the three years ending March 1917.

Administration.

In 1897 the Province, which had formerly been administered by a Chief Commissioner, was raised to a Lieutenant-Governorship. The head of the Province is therefore now the Lieutenant-Governor. He has a Council of seventeen members, one of whom is elected by the Burma Chamber of Commerce, one by the Rangoon Trades Association and the remaining fifteen are nominated by the Lieutenant-Governor. Not more than seven members may be official; the rest must be non-officials, and at least four

must be selected from the Burmese population, one from the Indian and one from the Chinese community.

Burma is divided administratively into Upper Burma (including the Shan States and Chin Hills) and Lower Burma. The Shan States are administered by the Chiefs of the States, subject to the supervision of the Superintendents in the case of the Northern and Southern Shan States, and to the supervision of the Commissioners of the adjoining Divisions in the case of the other States. The Civil, Criminal and Revenue administration is vested in the Chief of the State, subject to the restrictions contained in the sanad. The law administered is the customary law of the State.

The Chin Hills are administered by a Superintendent.

Under the Lieutenant-Governor are eight Commissioners of divisions, four in Upper and four in Lower Burma. Commissioners in Upper Burma and the Commissioner of the Arakan Division are ex-officio Sessions Judges, but the other three Commissioners have been relieved of all judicial work.

Under the Commissioners are 40 Deputy Commissioners in charge of districts including the Police officers in charge of the Hill Districts of Arakan and the Salween District, who exercise the powers of a Deputy Commissioner. Deputy Commissioners are also District Magistrates, Collectors, and Registrars, except in Rangoon, where there is both a District Magistrate and a Collector. Subordinate to the Deputy Commissioner are Assistant Commissioners, Extra Assistant Commissioners and township officers, called Myooks. In the villages are the village headmen, Thugyis, assisted in Lower Burma by the Seeingaungs (rural policemen in charge of ten houses). The revenue administration is controlled by a Financial Commissioner assisted by two Secretaries. Subordinate Departments are in charge of a Commissioner of Settlements and Land Records, a Director of Agriculture, a Superintendent of the Civil Veterinary Department and a Registrar of Co-operative Credit Societies.

Justice.

The administration of Civil and Criminal Justice is under the control of the Chief Court of Lower Burma with five judges, and of the Judicial Commissioner, Upper Burma, with an Assistant Judicial Commissioner. There are seven Divisional and eight District Judges. There are also separate Provincial and Subordinate Judicial Services. Divisional Judges are also Sessions Judges. The Chief Court at Rangoon is the highest Civil Court of appeal and the highest court of Criminal appeal and revision in Lower Burma. It is also the High Court for the whole of Burma (including the Shan States) where European British subjects are concerned. It is the principal Civil and Criminal Court of original jurisdiction for Rangoon Town and hears appeals from all sentences of Courts and magistrates exercising jurisdiction in Rangoon Town.

In Criminal and Civil matters the Judicial Commissioner of Upper Burma exercises the power of a High Court for appeal, reference and revision, except in respect of criminal cases in which European British subjects are concerned.

All village headmen have limited magisterial powers and a considerable number are also invested with civil jurisdiction to a limited extent.

In pursuance of the policy of decentralization steps were taken in 1917 to restore to the village headmen the power and influence which they possessed in Burmese times before the centralizing tendencies of British rule made them practically subordinate officers of the administration.

Municipalities.

The Rangoon Municipality is the most important, with an income of Rs. 46·31 lakhs and an expenditure of Rs. 36·81 lakhs. The Chairman is a member of the Indian Civil Service of Deputy Commissioner's rank. The members of the Committee are elected by wards.

There are 44 minor Municipalities, of which the most important are those at Mandalay and Moulmein. The average incidence of Municipal taxation is Rs. 2·3·5 per head, but in Rangoon it reaches Rs. 12.

Local Funds.

No Local Boards or District Boards exist in Burma. But in Lower Burma there are District Cess Funds, derived mostly from a 10 per cent. cess on collections of ordinary local revenue and from collections from markets, ferries, slaughter houses, etc. The total receipts exceed Rs. 38 lakhs.

In Upper Burma there are District Funds. They are derived from market, ferry and license fees and occasional grants from Provincial revenues. The total revenue exceeds Rs. 12 lakhs.

There are 7 Cantonment Funds, 22 Town Funds and, excluding the Rangoon Port Trust, 6 Port Funds.

Finance.

In Burma, as in other Provinces, the finances are based on a "Provincial Settlement," which came into force on the 1st April 1907. The Government of India retains in the first place the entire profits of the commercial departments, such as Posts and Telegraphs, and in the second place, all the revenue where the 'locale' is no guide to its true incidence, such as the net receipts from Customs, Salt and Opium. But as the income from these sources is inadequate for the purpose of meeting the cost of the Imperial Services, special arrangements are made as with other Provinces for the division of the remaining sources of revenue between Imperial and Provincial Funds.

In 1910-1911, as a result of the Report of the Decentralisation Committee, modifications were introduced into the Settlement. Briefly, the Local Government retains 5-8ths of the net Land Revenue instead of a half, and the whole of the net forest revenue. Stamps, Excise and

Income tax receipts are divided equally between Imperial and Provincial revenues. The unfairness of the Provincial settlement is disguised by the inclusion, under the head of Land revenue, of capitation taxes amounting to nearly a crore of rupees. This is a tax peculiar to Burma and should be entirely provincial. The injustice of the existing arrangement is redressed by contributions from Imperial revenues, which enable the Local Government to remain solvent (see below). But it is a very unsatisfactory form of finance that robs a province of what are rightly its own revenues and remedies the injustice by means of doles.

The following figures show the gross revenue and expenditure for 1917-18 :—

	Receipts. Rs.	Expenditure. Rs.
Imperial	.. 1449·52 lakhs	53·18 lakhs
Provincial	.. 555·59 "	578·27 "
District Funds	51·17 "	58·24 "
Municipalities	98·79 "	95·44 "
Other Funds	84·73 "	83·30 "

The Imperial Government makes a fixed annual assignment to the Burma Government. Under the settlement of 1911 this assignment was fixed at Rs. 12·90 lakhs. The total contributions from Imperial Funds during the year 1917-18 amounted to Rs. 46·93 lakhs. From April 1st, 1915, onwards the Government of India has allotted an additional recurring grant of Rs. 15·11 lakhs to the province, and has further guaranteed to the province a minimum aggregate of revenue advancing by Rs. 8 lakhs annually until 1923-24. No payments under this guarantee are to be made till after the war but it will have retrospective effect from the year 1911-12. The new financial arrangements proposed in the Montagu-Chelmsford scheme will no doubt upset all these agreements.

Public Works.

This Department is administered by two Chief Engineers who are also Secretaries to Government in the Public Works Department. There are eight Superintending Engineers (including one for Irrigation and a Sanitary Engineer), 83 Executive Engineers and Assistant Engineers. A Consulting Architect is attached to Head Quarters.

There are four Major Irrigation Works—Mandalay, Shwebo and Mon Canals and the Ye-U canal in the Shwebo District. These irrigate nearly 400,000 acres. Minor irrigation works maintained by the department supply water to another 400,000 acres, and a large area is supplied with water from minor works maintained by the villagers themselves. The area in lower Burma protected from floods and thrown open to cultivation by means of embankments is nearly 800,000 acres.

Police.

The Police Force is divided into Civil, Military and Rangoon Town Police. The first two are under the control of the Inspector-General of Police, the latter is under the orders of the Commissioner of Police, Rangoon, an officer of the rank of Deputy Inspector-General.

There are four other Deputy Inspectors-General, one each for the Eastern and Western Range, one for the Railway and Criminal Investigation Department and one for the Military Police.

The sanctioned strength of the Civil Police Force at the end of 1917 was 1,369 officers, and 14,425 men, but the numbers were 74 officers and 864 men short of the sanctioned strength. The strength of the Military Police on the 1st January 1918 was 16,409 officers and men. The Rangoon Town Police stand at 106 officers and 1,246 men but at the end of 1917 the force was 3 officers and 105 men short.

A special feature of Burma is the Military Police. Its officers are deputed from the Indian Army. The rank and file are recruited from natives of India with a few Kachins, Karens and Shans. The experiment of recruiting Burmese on a small scale has been successful. The organisation is military, the force being divided into battalions. The object of the force is to supplement the regular troops in Burma. Their duties, apart from their military work is to provide escorts for specie, prisoners, etc., and guards for Treasuries, Jails and Courts. During the year 1917 the Military Police furnished 4,644 volunteers who were drafted into Indian regiments on active service, making 9,858 since war began.

Education.

At the head is the Director of Public Instruction with a Deputy Director. There are 6 Inspectors of Schools belonging to the Imperial and 3 belonging to the Provincial Service, and 7 Assistant Inspectors and one Assistant Inspectress belonging to the Provincial Service. The Rangoon College is staffed by a Principal and ten Professors drawn from the Imperial Service with three from the Provincial Service. Outside the Education Department is the Educational Syndicate, which holds certain examinations and serves as an advisory body on educational questions referred to it by Government. Vernacular education is controlled by Divisional Boards assisted by District Advisory Committees. A scheme of the constitution of District Boards is nearing completion.

Pending the establishment of the Burma University at the end of the war, the Rangoon College and the Baptist College are affiliated to the Calcutta University. Under Government there are—

An Arts College, Law School, Reformatory School, School of Engineering, Medical School, Veterinary Training School, Apprentice School, High School for Europeans, High School at Taunggyi for the sons of Shan Chiefs, 5 Normal Schools, 21 Anglo-Vernacular High Schools, and 16 Anglo-Vernacular Middle Schools.

Aided Schools, managed chiefly by Christian Missions, include 31 European Schools, 7 Normal Schools and 142 Anglo-Vernacular Schools. The number of schools managed by Buddhist Societies is steadily increasing.

A remarkable feature of education in Burma is the system of elementary education evolved, generations ago, by the genius of the people. Nearly every village has a monastery (hpoongyi,

kyaung); every monastery is a village school and every Burman boy must, in accordance with his religion, attend that school, shaving his head and for the time wearing the yellow robe. At the hpoongyi-kyaungs the boys are taught reading and writing and an elementary native system of arithmetic. The result is that there are very few boys in Burma who are not able to read and write and the literacy of Burman men is 412 per mille.

Of 8,447 Vernacular Schools registered under the grant in aid rules and subject to regular inspection about one-third are Monastic Schools.

Another feature of education in Burma is the excellent work of the American Baptist Mission, which has established schools in most of the important towns in Burma, as well as a College in Rangoon.

Medical.

The control of the Medical Department is vested in an Inspector-General of Civil Hospitals. Under him are 41 Civil Surgeons. There is also a Sanitary Commissioner, two Deputy Sanitary Commissioners, an Inspector-General of Prisons, three whole time Superintendents of Prisons, a Chemical Examiner and Bacteriologist and a Superintendent of the Lunatic Asylum.

A Civil Surgeon is in charge of each District, while at the summer Head Quarters of Maymyo there is a special Civil Surgeon.

The total number of Hospitals and Dispensaries was 274 at the end of March 1917. The Rangoon General Hospital is perhaps the finest in the East.

The Pasteur Institute was opened in Rangoon in July 1915. The Director is a senior member of the Indian Medical Service.

The total number of patients treated in 1916 was nearly 2 millions.

The expenditure on hospitals and dispensaries in 1917 was 20·09 lakhs.

Administration.

Lieutenant-Governor, Sir Reginald Craddock, K.C.S.I.

Private Secretary, G. C. Tew, I.C.S.

Aide-de-Camp, Captain F. T. Drake-Brockman.
Honorary Aides-de-Camp, Lt.-Col. A. W. H. Lee and Capt. E. J. C. Horden.

Indian Aides-de-Camp, Hony. Capt. Muzaffar Khan, *Sardar Bahadur*; Subadar Sao Tang; Naib Commandant Sarraan Singh, *Sardar Bahadur*.

LEGISLATIVE COUNCIL OF THE LIEUTENANT-GOVERNOR.

Officials.

Charles M. Webb, I.C.S.

C. H. Wollaston.

Harry Tonkinson, I.C.S.

Gavin Scott, I.C.S.

Frederick Lewisohn, I.C.S.

John Guy Rutledge, M.A.

Non-Officials.

Dr. Nasarwanji Nowroji Parakh.
 Lim Chin Tsong.
 Sir Sao Mawng, C.I.E.
 Abdul Karim Abdul Shakur Jamal, C.I.E.
 Francis Foster Goodlife.
 Maung Po Tha.
 Dr. San Crombie Po, M.D.
 E. J. Holberton, O.B.E.
 Maung May Oung.
 J. E. Du Bern.
 Maung Nyun.

SECRETARIAT.

Chief Secretary, C. M. Webb, M.A., I.C.S.
Revenue Secretary, F. Lewisohn, M.A., I.C.S.
Secretary, P.W.D., C. H. Wollaston.
Officiating Joint Secretary, P. W. D., H. E. W. Martindell.
Offg. Financial Commissioner, R. E. V. Arbuthnot, I.C.S.
Senior Registrar, K. M. Basu.

Miscellaneous Appointments.

Settlement Commissioner and Director of Land Records, R. E. V. Arbuthnot.
Director of Agriculture, D. F. Chalmers.
Consulting Architect, T. O. Foster, F.R.I.B.A.
Superintendent and Political Officer, Southern Shan States, G. C. B. Stirling.
Superintendent and Political Officer, Northern Shan States, H. A. Thornton.
Director of Public Instruction, J. M. S. Hunter, M.A.
Inspector-General of Police, Lt.-Col. H. Des Voeux.

Chief Conservator of Forests, C. G. Rogers.
Inspector-General of Civil Hospitals, Col. Percy Charles Hutchison Strickland.
Sanitary Commissioner, Lt. Col. C. E. Williams.
Inspector-General of Prisons, Major H. H. G. Knapp.
Commissioner of Excise, Lieut.-Colonel T. L. Ormiston.
Accountant-General, Upendralal Majumdar, M.A.
Postmaster-General, G. W. Talbot.

Chief Commissioners of Burma.

Lieut.-Colonel A. P. Phayre, C.B.	..	..	1862
Colonel A. Fytche, C.S.I.	..	..	1867
Lieut.-Colonel R. D. Ardagh	..	..	1870
The Hon. Ashley Eden, C.S.I.	..	..	1871
A. R. Thompson, C.S.I.	..	..	1875
C. U. Aitchison, C.S.I.	..	..	1878
C. E. Bernard, C.S.I.	..	..	1880
C. H. T. Crosthwaite	..	..	1883
Sir C. E. Bernard, K.C.S.I.	..	..	1886
C. H. T. Crosthwaite, C.S.I.	..	..	1887
A. P. MacDonnell, C.S.I. (a)	..	..	1889
Alexander Mackenzie, C.S.I.	..	..	1890
D. M. Smeaton	..	..	1892
Sir F. W. R. Fryer, K.C.S.I.	..	..	1895

(a) Afterwards (by creation) Baron MacDonnell.

Lieutenant-Governors of Burma.

Sir F. W. R. Fryer, K.C.S.I.	..	..	1897
Sir H. S. Barnes, K.C.S.I., K.C.V.O.	..	..	1903
Sir H. T. White, K.C.I.E.	..	..	1905
Sir Harvey Adamson, Kt., K.C.S.I., LL.D.	..	..	1910
Sir Harcourt Butler, K.C.S.I., C.I.E.	..	..	1915
Sir Reginald Craddock, K.C.S.I.	..	..	1917

Bihar and Orissa.

Bihar and Orissa lies between 19°-02' and 27°-30' N. latitude and between 82°-31' and 88°-26' E. longitude and includes the three provinces of Bihar, Orissa and Chota Nagpur, and is bounded on the north by Nepal and the Darjeeling district of Bengal; on the east by Bengal and the Bay of Bengal; on the south by the Bay of Bengal and Madras; and on the west by the United Provinces of Agra and Oudh and the Central Provinces.

The area of the British territories which constitute the Lieutenant-Governorship of Bihar and Orissa is 83,181 square miles inclusive of the area of large rivers. In addition to the districts which are directly under British rule, there are two groups of petty States which lie to the south and south-west of the Province and which under the names of the Tributary and Feudatory States of Orissa and the Political States of Chota Nagpur are governed each by its own Chief under the superintendence and with the advice of the Commissioner of the nearest British Administrative division assisted, in the case of the Orissa States, by a Political Agent. The area of these territories is 28,648 square miles and as it is usual to include them when speaking of Bihar and Orissa the area of the whole Province may be stated at 111,829 square miles. Two of the provinces of the Lieutenant-Governorship of Bihar and Orissa, *viz.*, Bihar and Orissa, consist of great river valleys, the third, Chota Nagpur, is a mountainous region which separates them from the Central Indian Plateau. Orissa embraces the rich deltas of the Mahanadi and the neighbouring rivers and is bounded by the Bay of Bengal on the south-east and walled in on the north-west by the hilly country of the Tributary States. Bihar lies on the north of the Province and comprises the valley of the Ganges from the spot where it issues from the territories of the Lieutenant-Governor of the United Provinces of Agra and Oudh till it enters Bengal near Rajmahal. Between Bihar and Orissa lies Chota Nagpur. Following the main geographical lines there are five Civil Divisions with head-quarters at Patna, Muzaffarpur (for Tirhut), Bhagalpur, Cuttack (for Orissa) and Ranchi (for Chota Nagpur).

The People.

The temporary head-quarters of Government are at Ranchi in Chota Nagpur, while the permanent Capital at Patna is nearing completion, the High Court, Government House and the Secretariat being already occupied. Various residences for the officials and quarters for the ministerial officers remain to be built. The new capital which lies between the Military Cantonment of Dinapore and the old civil station of Bankipore is known as "Patna", the old town being called Patna City." The Province has at present no hill station. Enquiries are being made and records taken at Netarhat, an extensive plateau elevation 3,700 feet, 90 miles over west of Ranchi, where climatic conditions closely resemble Pachmarhi.

The Province has a population of 38,435,293 persons which is very little less than that of France and rather more than that of the Bombay Presidency. The province is almost entirely rural, no fewer than 966 per mille of the population living in villages. Even so with 344 persons per square mile, Bihar and Orissa is more thickly populated than Germany. There are only three towns which can be classed as cities, namely, Patna, Gaya and Bhagalpur. During the last thirty years the population of Patna, the capital designate, has been steadily diminishing. Hindus form an overwhelming majority of the population. Though the Muhammadans form less than one-tenth of the total population they constitute more than one-fifth of urban population of the province. Animists account for 7 per cent. These are inhabitants of the Chota Nagpur plateau and the Santal Parganas, the latter district being a continuation of the plateau in a north-easterly direction.

Industries.*

The principal industry is agriculture, Bihar, more especially North Bihar, being the "Garden of India." Rice is the staple crop but the spring crops, wheat, barley, and the like are of considerable importance. It is estimated that the normal area cultivated with rice is 15,615,100 acres or 48 per cent. of the cropped area of the Province. Wheat is grown on 1,121,800 million acres, barley on 1,411,800 acres, maize or Indian-corn on 1,634,600 acres, the latter being an autumn crop. Oilseeds are an important crop, the cultivation having been stimulated by the demand for them in Europe. It is estimated that 1,932,300 acres of land are annually cropped with oil-seeds in the Province. There is irrigation in Shahabad, Gaya, Champaran and Muzaffarpur districts in Bihar and in Balasore and Cuttack in Orissa. The Indigo industry had before the war been steadily on the decline, the total area sown having decreased from 342,000 acres in 1896 to 109,600 acres in 1911. The principal cause of this was the discovery of the possibilities of manufacturing synthetic or chemically prepared indigo on a commercial scale, a process chiefly carried out in Germany. Owing, however, to the stoppage of supplies from Germany the value of natural indigo has risen enormously and the area under cultivation has also risen from 38,500 to 86,700 acres and the total yield has increased from 8,181 factory maunds to 15,318. In the district of Purnea and in Orissa, and parts of the Tirhut Division jute is grown, but the acreage varies according to the price of jute. In 1917-18 it was 223,300 acres. The last serious famine was in 1895-96. In any year in which monsoon currents from either the Bay of Bengal or the Arabian Sea are unduly late in their arrival or cease abruptly before the middle of September the agricultural situation is very grave. It may be said that for Bihar the most important rainfall is that known as the *hauka*, due towards the end of September or up to middle of October. Rain at this time not only

* The figures given in this paragraph relate to British territory only.

contributes materially to an increased outturn of the rice crop, but also provides the moisture necessary for starting the spring or *rabi* crops.

Manufactures.

Opium was formerly, with indigo, the chief manufactured product of Bihar, but in consequence of the agreement with the Chinese Government the Patna Factory has been closed. At Monghyr the Peninsular Tobacco Company have erected one of the largest cigarette factories in the world and as a result tobacco is being grown much more extensively. There are two important iron works in the Singhbhum District. Messrs. Tata & Co.'s Iron and Steel Works at Sakchi and the Bengal Iron and Steel Company at Dhulia. The Cape Copper Co. are also opening up copper mines at the Rakha Hills in the same district. The amount of Copper Ore extracted in 1917-18 was 20,108 tons. But by far the most important of the mineral industries in the province is that concerned in the raising of coal. The coalfields in the Manbhum District have undergone an extraordinary development in the past twenty years. There are now 444 coal mines in this Province with an output of nearly 12 millions tons. The war has demonstrated the great value of the mica mines in Hazaribagh and Gaya which are now entirely controlled by Government and the output from which has considerably increased under the management of an officer deputed from the Geological Department.

Administration.

The Province is administered by a Lieutenant-Governor in Council. The Lieutenant-Governor is appointed by the Crown and is a senior member of the Indian Civil Service. He is assisted by a Council of three members, two of whom are drawn from the Indian Civil Service, while the third, in practice, is an Indian. Each member takes charge of certain departments and in the event of any difference of opinion regarding inter-departmental references the matter is decided in Council. In practice all important cases are submitted through the member concerned to the Lieutenant-Governor.

Finance.

The Province of Bihar and Orissa was formed with five divisions, detached from the old province of Bengal with effect from the 1st April 1912. The old arrangements made with the Government of Bengal regarding the financial administration of the Province therefore ceased to apply from that date. A fresh arrangement has, however, been made, with the approval of the Secretary of State. As the method adopted was in some measure tentative and provisional, a temporary settlement for a period of three years only has been effected. Owing to the war it has been found necessary to continue the provisional settlement for the present. Under the terms of this settlement the whole of the receipts under the heads of Interest, Forest, Registration, Courts of Law, Jails, Police, Ports and Pilotage, Education, Medical and superannuation receipts have been made over entirely to the local Government together with their corresponding charges. In addition to

these, it receives three-fourths of the receipts from excise, the whole of the Land Revenue collected from Government Estates, one-half of the receipts under all other sub-heads excepting recoveries from zamindars and raiyats on account of survey and settlement in Bihar and other similar special surveys and the whole of the receipts under Scientific and other Minor Departments.

The only expanding items of revenue are Excise and Stamps. The Provincial Budget for 1918-19 shows an opening balance of Rs. 1,39,13,000. Receipts Rs. 3,47,97,000, Expenditure Rs. 3,67,16,000, Closing Balance Rs. 1,19,94,000. The reduction in the balance is primarily due to the construction of the new capital at Patna.

Public Works.

The Public Works Department in the Province of Bihar and Orissa consists of two branches, *viz.*:—(1) Roads and Buildings, and (2) Irrigation and Marine, which also deals with railways. Each branch has a Chief Engineer, who is also Secretary to the Local Government with an Engineer Officer as Under Secretary under him. There is also a non-professional Assistant Secretary, a Consulting Architect and a Sanitary Engineer, who works under a Sanitary Board. The electrical work of the Province is carried out by an Electrical Inspector and a staff of subordinates.

Justice.

The administration of justice is controlled by the High Court of Judicature recently established at Patna. In the administration of civil justice below the High Court are the District Judges as Courts of Appeal, the Subordinate Judges and the Munsiffs. The jurisdiction of a District Judge or Subordinate Judge extends to all original suits cognizable by the Civil Courts. It does not, however, include the powers of a Small Cause Court, unless these be specially conferred. The ordinary jurisdiction of a Munsif extends to all suits in which the amount or value of the subject matter in dispute does not exceed Rs. 1,000 though the limit may be extended to Rs. 2,000. On the criminal side the Sessions Judge hears appeals from Magistrates exercising first class powers while the District Magistrate is the appellate authority for Magistrates exercising second and third class powers. The District Magistrate can also be, though in point of fact he very rarely is, a court of first instance. It is usual in most districts for a Joint Magistrate or a Deputy Magistrate to receive complaints and police reports, cases of difficulty or importance being referred to the District Magistrate who is responsible for the peace of the district. In the non-regulation districts the Deputy Commissioner and his subordinates exercise civil powers and hear rent suits.

Local Self-Government.

Bengal Act III of 1884, which regulates the constitution, powers and proceedings of Municipal bodies in this Province has been amended by the Bengal Acts IV of 1894 and II of 1896. By these enactments the elective franchise has been further extended, and now provides for the establishment and maintenance of veterinary institutions and the training of the requi-

site staff, the improvement of breeds of cattle, the training and employment of female medical practitioners, the promotion of physical culture, and the establishment and maintenance of free libraries.

The total number of Municipalities at present in existence is 55. The ratepayers of 49 Municipalities have been granted the privilege of electing two-thirds of the number of Commissioners fixed in each case, whilst in 34 cases the Commissioners are authorised to elect their own Chairman. In the remaining towns Government has reserved to itself the power of appointing the Commissioners or Chairman, as the case may be, owing either to the backwardness of the place or to the necessity for holding the balance against contending interests or strong party feeling. It is only in 4 towns, however, that Government exercises complete control in the appointment of both Commissioners and Chairmen.

The total receipts of Municipalities including grants from the Local Government and the opening balance totalled Rs. 47½ lakhs in 1917-18, and the expenditure was Rs. 37 lakhs.

Apart from Municipalities, each district with the exception of the Santal Parganas, Angul and Singhbhum has a District Board constituted under Bengal Act III of 1885. Municipal areas are excluded in accordance with the provisions of section 1. Local Boards have been formed in all of these districts where there are sub-divisions, except Ranchi. There are at present 18 District Boards, 45 Local Boards, and 23 Union Committees in the Province.

In accordance with the provisions of section 7 of the Act, a District Board is to consist of not less than 9 members. Local Boards are entitled to elect such proportion (as a rule one-half) of the whole of the District Board as the Lieutenant-Governor may direct. In districts where there are no Local Boards, the whole of the members are appointed by Government. The Chairman of the District Board is appointed by Government; he is in practice always the Magistrate of the district.

Land Tenures.

Estates in the Province of Bihar and Orissa are of three kinds, namely, those permanently settled from 1793 which are to be found in the Patna, Tirhut and Bhagalpur divisions, those temporarily settled as in Chota Nagpur and parts of Orissa, and estates held direct by Government as proprietor or managed by the Court of Wards. The passing of the Bengal Tenancy Act (VIII of 1885) safeguarded the rights of the cultivators under the Permanent Settlement Act. Further, the Settlement Department under the supervision of the Director of Land Records makes periodical survey and settlement operations in the various districts, both permanently and temporarily settled. In the former, the rights of the undertenants are recorded and attested, while in the latter there is the re-settlement of rents. In the re-settlement proceedings, rents are fixed not only for the landlords but also for all the tenants. A settlement can be ordered by Government on application made by raiyats.

The tenures of Orissa are somewhat different Under the zamindars, that is, the proprietors who took settlement from Government and pay revenue to Government direct, is a class of subordinate proprietors or proprietary tenure holders, who were originally village headmen, dealing more or less direct with the revenue authorities. They have a variety of names, such as *mukadam*, *padhan*, *maurusi*, *sarbarakar*, *pursethi*, *khariddar* and *shikmi* zamindar. These sub-proprietors or proprietary tenure holders pay their revenue through the zamindars of the estates within which their lands lie. In Chota Nagpur, Orissa and the Santal Parganas, the rights of village headmen have been recognised. The headman collects the rents and is responsible for them minus a deduction as remuneration for his trouble.

Both Orissa and Chota Nagpur have their own Tenancy Acts.

Police.

The Departments of Police, Prisons and Registration are each under the general direction of Government, supervised and inspected by an Inspector-General with a staff of assistants. The Commissioner of Excise and Salt is also Inspector-General of Registration.

Under the Inspector-General of Police are three Deputy Inspectors-General and 27 Superintendents. There are also 27 Assistant Superintendents of Police and 15 Deputy Superintendents. The force is divided into the District Police, the Railway Police and the Military Police. A Criminal Investigation Department has also been formed for the collection and distribution of information relating to professional criminals and criminal tribes whose operations extend beyond a single district and to control, advise, and assist in investigations of crime of this class and other serious cases in which its assistance may be invoked. There are two companies of Military Police which are maintained as reserves to deal with serious and organised disturbances and perform no ordinary civil duties.

Education.

The total expenditure on Public Instruction in 1917-18 was Rs. 80,89,656 of which direct expenditure amounted to Rs. 60,07,652 and indirect to Rs. 20,82,004. Of the direct expenditure Rs. 4,47,923 was spent on colleges, Rs. 18,17,455 on secondary schools, Rs. 29,42,923 on primary schools and Rs. 7,99,351 on training and other special schools. Of the indirect expenditure about nine lakhs were spent on buildings, furniture and apparatus six lakhs on direction and inspection, more than a lakh on scholarships, about two lakhs on University and more than three lakhs on miscellaneous charges. In British territory alone there were 29,472 institutions attended by 852,324 scholars representing 16.4 per cent. of the total population of school-going age. The number of male pupils was 737,783 or 29.2 per cent. of the male population of school-going age and of the female pupils 110,335 or 4.2 per cent. of the female population of school-going age.

A University has recently been established at Patna.

There are 7 Arts Colleges with 2,811 students and one Training College for 32 students, which with the Patna College, the Ravenshaw College at Cuttack and the Greer Bhumiha Brahman College at Muzaffarpur is maintained by Government. The College at Bhagalpur, the Bihar National College at Bankipore and the Dublin University Mission College at Hazaribagh are aided by Government.

Medical.

The Medical Department is under the control of the Inspector-General of Civil Hospitals who is a Member of the Indian Medical Service. Under him there are 20 Civil Surgeons who are responsible for the medical work of the districts at the head-quarters of which they are stationed. 57 Dispensaries are maintained by Government in addition to 330 Dispensaries maintained by Local bodies, Railways, private persons, etc. 3,463,145 patients including 50,625 in-patients in public dispensaries were treated.

The total income of the medical institutions amounted to Rs. 16,69,916. A large asylum for Europeans has been opened at Ranchi which receives patients from Northern India. A similar institution is under construction for the Indians. At present these are treated at Patna.

Administration.

Lieutenant-Governor, Sir Edward Gait, K.C.S.I., C.I.E. Assumed charge of office, 19th November 1915.

PERSONAL STAFF.

Private Secretary, William Surridge Hitchcock.

Aide-de-Camp, Lt. E. D. T. Rowley.

Honorary Aides-de-Camp, Hon. Capt. Sardar Bahadur Hira Singh, Subadar Major Sita Ram Singh, Major A. T. Peppe and Major J. A. M. Wilson.

EXECUTIVE COUNCIL.

Havilland Le Mesurier, C.S.I., C.I.E., I.C.S.

Rai Bahadur Krishna Sahay.

Walter Maude, C.S.I.

LEGISLATIVE COUNCIL.

President, The Lieutenant-Governor.

Ex-Officio.

The Members of the Executive Council.

NOMINATED.

Officials.

Frederick Percival Dixon, I.C.S.

J. G. Jennings.

J. F. Grunning.

George Rainy, I.C.S.

Blanchard Foley.

Birendra Chandra Sen.

Stoner Forrest.

F. Clayton.

John Austen Hubback, I.C.S.

B. A. Collins, I.C.S.

W. S. Bremner.

Robert Thomas Dundas, C.I.E.

T. S. Macpherson.

Donald Weston.

Lt.-Col. Bawa Jiwan Singh.

Non-Officials.

Maharaja Bahadur Sir Ravaneswar Prasad Singh, K.C.I.E.

Rai Bahadur Nishi Kanta Sen.

Madhu Sudan Das, C.I.E.

ELECTED.

Raja Harihar Parshad Narayan Singh.

Babu Maheshwar Prashad.

Kirtyanand Singh.

Babu Ganesh Lal Pandit.

Kumar Thakural Girivar Prasad Singh.

Julian Veitch Jameson.

Moulvi Saiyid Nurul Hasan.

Saiyid Ahmad Husain.

J. H. Pattinson.

Saiyid Muhammad Naim.

Khwaja Muhammad Nur.

Bishun Prasad.

Dwarka Nath Rai Bahadur.

Lachmi Prasad Sinha.

Braja Sundar Das.

Sharat Chandra Sen.

Purnendu Narayan Singh.

Adit Prashad Singh.

Kumar Shevanandan Prasad Singh.

Babu Gopabandhu Das.

Shyam Krishna Sahay.

SECRETARIAT.

Chief Secretary to Government, Political, Appointment, and Educational Departments, H. McPherson.

Secretary to Government, Financial and Municipal Departments, J. D. Sifton (*on leave*).
B. A. Collins (*officiating*).

Secretary to Government, Revenue Department,
J. A. Hubback.

Secretary to Government (P. W. D.), Irrigation Branch, F. Clayton.

Buildings and Roads Branch, E. G. Stanley (*on leave*). W. S. Bremner (*officiating*).

BOARD OF REVENUE.

Member, E. H. C. Walsh.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, The Hon. Mr. H. Sharp, M.A., C.I.E.

Inspector-General of Police, R. T. Dundas.
Conservator of Forests, H. H. Hains (*on leave*). Frederick Trafford (*offg.*).

Inspector-General of Civil Hospitals, Col. G. J. H. Bell.

Sanitary Commissioner, Major William Charles Ross.

Inspector-General of Prisons, Lt.-Col. Bawa Jiwan Singh, C.I.E., I.M.S.

Accountant-General, V. C. Scott O'Connor.
Director of Agriculture, G. Milne.

The Central Provinces and Berar.

The Central Provinces and Berar compose a great triangle of country midway between Bombay and Bengal. Their area is 130,991 miles, of which 82,000 are British territory proper and the remainder held by Feudatory Chiefs. The population (1911) is 13,916,308 under British administration and 2,117,002 in the Feudatory States. Various parts of the Central Provinces passed under British control at different times in the wars and tumult in the first half of the 19th century and the several parts were amalgamated after the Mutiny, in 1861, into the Chief Commissionership of the Central Provinces. Berar was, in 1853, assigned to the East India Company as part of a financial arrangement with the Nizam and was transferred to the Central Provinces in 1903, as the result of a fresh agreement with the Nizam.

The Country.

The Central Provinces may roughly be divided into three tracts of upland, with two intervening ones of plain country. In the north-west, the Vindhyan plateau is broken country, covered with poor and stunted forest. Below its precipitous southern slopes stretches the rich wheat growing country of the Nerbudda valley. Then comes the high Satpura plateau, characterised by forest-covered hills and deep water-cut ravines. Its hills decline into the Nagpur plain, whose broad stretches of shallow black cotton soil make it one of the more important cotton tracts of India and the wealthiest part of the C. P. The Eastern half of the plain lies in the valley of the Wainganga and is mainly a rice growing country. Its numerous irrigation tanks have given it the name of the "lake country" of Nagpur. Further east is the far-reaching rice country of Chattisgarh, in the Mahanadi basin. The south-east of the C. P. is again mountainous, containing 24,000 square miles of forest and precipitous ravines, and mostly inhabited by jungle tribes. The Feudatory States of Bastar and Kankar lie in this region. Berar lies to the south-west of the C. P. and its chief characteristic is its rich black cotton-soil plains.

The People.

The population of the province is a comparatively new community. Before the advent of the Aryans, the whole of it was peopled by the Gonds and these aboriginal inhabitants fared better from the Aryans than their like in most parts of India because of the rugged nature of their home. But successive waves of immigration flowed into the province from all sides. The early inhabitants were driven into the inaccessible forests and hills, where they now constituted a large portion of the tribes in those parts, who form a quarter of the whole population of the C. P. The Gonds are still found in large numbers in all parts of the province, but they are partially concentrated in the south-east. The main divisions of the new comers are indicated by the language divisions of the province. Hindi, brought in by the Hindustani-speaking peoples of the North, prevails in the North and East; Marathi in

Berar and the west and centre of the C. P. Hindi is spoken by 56 per cent. of the population and is the *lingua franca*. Marathi by 31 per cent. and in Berar, and Gondi by 7 per cent. The effects of invasion are curiously illustrated in Berar, where numbers of Moslems have Hindu names, being descendants of former Hindu officials who on the Mahomedan invasion adopted Islam rather than lose their positions. The recent census shows that a gradual Brahmanising of the aboriginal tribes is going on. The tribes are not regarded as impure by the Hindus and the process of absorption is more or less civilising.

Industries.

When Sir Richard Temple became first Chief Commissioner of the C. P. the province was land-locked. The only road was that leading in from Jubbulpore to Nagpur. The British administration has made roads in all directions, the two trunk railways between Bombay and Calcutta run across the province and in the last few years a great impetus has been given to the construction of subsidiary lines. These developments have caused a steady growth of trade and have aroused vigorous progress in every department of life. The prime industry is, of course, agriculture, which is assisted by one of the most admirable agricultural departments in India and is now receiving additional strength by a phenomenal growth of the co-operative credit movement. The land tenure is chiefly on the zemindari, or great landlord system, ranging, with numerous variations, from the great Feudatory chiefships, which are on this basis, to holdings of small dimensions. A system of land legislation has gradually been built up to protect the individual cultivator. Berar is settled on the Bombay ryotwari system. Thirty-eight per cent. or about 44,000 square miles of the C. P. is forest: in Berar the forest area is 3,941 square miles. The rugged nature of the greater part of the country makes forest conservation difficult and costly. Excluding forest and wastes, 57 per cent. of the total land is occupied for cultivation; in the most advanced districts the proportion is 80 per cent.; and in Berar the figure is also high. The cultivated area is extending continuously except for the temporary checks caused by bad seasons. Rice is the most important crop of the C. P., covering a quarter of the cropped area. Wheat comes next, with 15½ per cent., then pulses and cereals used for food and oil seeds, with 11 per cent. and cotton with 7 per cent. In Berar cotton occupies nearly 40 per cent. of the cropped area, jowar covers an equal extent, then wheat and oil seeds. In agriculture more than half the working population is female.

Commerce and Manufactures.

Industrial life is only in its earliest development except in one or two centres, where the introduction of modern enterprise along the railway routes has laid the foundations for great future developments of the natural wealth of the province. Nagpur is the chief centre of

a busy cotton spinning industry. The Empress Mills, owned by Parsi manufacturers, were opened there in 1877 and the general prosperity of the cotton trade has led to the addition of many mills here and in other parts of the province. The total output of spun yarn now amounts to approximately 50 million yards a year.

The largest numbers engaged in any of the modern industrial concerns are employed in manganese mining. Then follow coal mining, the Jabulpore marble quarries and allied works, the limestone quarries, and the mines for pottery clay, soapstone, &c.

The total number of factories of all kinds legally so described was 431 in 1918, the latest period for which returns are available and the number of people employed in them 48,993. The same economic influences which are operative in every progressive country during its transition stage are at work in the C. P. and Berar, gradually sapping the strength of the old village industries, as communications improve, and concentrating industries in the towns. While the village industries are fading away, a large development of trade has taken place. The last pre-war reports showed an increase in volume by one-third in eight years. In 1914 for the first time, statistics for the Berar factories were incorporated with those of the C. P.

Administration.

The administration of the Central Provinces and Berar is conducted by a Chief Commissioner, who is the controlling revenue and executive authority and is appointed by the Governor-General-in-Council. He is assisted by three secretaries, two under-secretaries and two assistant secretaries. Simultaneously with the jubilee of the foundation of the Province in 1913 a Legislative Council was constituted. It consists of 24 members, excluding the Chief Commissioner, 7 being elected by Municipalities, District Councils and Landholders in the C. P. and 17 nominated by the Chief Commissioner, of whom not more than 10 may be officials and 3 shall be non-officials chosen respectively by the municipalities, District Boards and Landholders of Berar. The Chief Commissioner may nominate an additional member, official or non-official, who has special knowledge of a subject on which legislation is pending. The C. P. are divided for administrative purposes into four divisions, and Berar constitutes another division. Each of these is controlled by a Commissioner. Berar is divided into four districts, three other divisions into five districts each and one into three, and these are controlled by Deputy-Commissioners, immediately subordinate to the Commissioners. The principal heads of Provincial departments are the Commissioner of Settlements and Director of Land Records, the Inspector-General of Civil Hospitals and Sanitary Commissioner, the Inspector-General of Police, the Inspector-General of Prisons, the Director of Public Instruction, the Commissioner of Excise, the Inspector-General of Registration, Assessed taxes, &c., and the Director of Agriculture, the Registrar, Co-operative Societies, and Director of Industries. The Deputy-Commissioners of districts are the chief revenue authorities and District Magistrates, and they exercise the usual powers

and functions of a district officer. The district forests are managed by a forest officer, usually a member of the Imperial Forest Service, over whom the Deputy-Commissioner has certain powers of supervision, particularly in matters affecting the welfare of the people. Each district has a Civil Surgeon, who is generally also Superintendent of the District Jail and whose work is also in various respects supervised by the Deputy-Commissioner. The Deputy-Commissioner is also marriage registrar and manages the estates of his district which are under the Court of Wards. In his revenue and criminal work the Deputy-Commissioner is assisted by (a) one or more Assistant Commissioners, or members of the Indian Civil Service; (b) one or more Extra-Assistant Commissioners, or members of the Provincial Civil Service, usually natives of India, but including a few Europeans and Anglo-Indians and (c) by tahsildars and naibtahsildars, or members of the Subordinate service, who are nearly always natives of India. The district is divided for administrative purposes into tahsils, the average area of which is 1,500 square miles. In each village a lambardar, or representative of the proprietary body, is executive headman.

Justice.

The Court of the Judicial Commissioner is the highest court of appeal in Civil cases, and also the highest Court of criminal appeal and revision for the Central Provinces and Berar except in reference to proceedings against European British subjects and persons jointly charged with European British subjects: in such cases the High Court of the N. W. P. and the High Court of the Bombay have jurisdiction over different parts of the Provinces.

The Court sits at Nagpur and consists of a Judicial Commissioner (who is appointed by the Governor-General in Council) and 3 Additional Judicial Commissioners of whom one at least must be an advocate of the Court or a Barrister or pleader of not less than 10 years' standing.

Subordinate to the Judicial Commissioner's Court are the District and Sessions Judges (11 in number) each of whom exercises civil and criminal jurisdiction in a Civil and Sessions district comprising one or more Revenue districts. The civil staff below the District and Sessions Judge consists of Sub-Judges and Munsiffs.

Local Government.

Municipal administration was first introduced under the Punjab Municipal Acts and the Municipality of Nagpur dates from 1864. Several revising Acts extend its scope. Viewed generally, municipal self-government is considered to have taken root successfully. The general basis of the scheme is the Local Board for each tahsil and the District Council for each district. In Berar these bodies are called Local Boards and District Boards. The larger towns have municipalities.

A certain proportion of the Local Board members are village headmen, elected by their own class, others are elected representatives of the mercantile and trading classes and a third proportion, not exceeding $\frac{1}{3}$ of the whole, are nominated by Government. The constitution of the District Councils is similar.

The District Councils in the C. P. have no power of taxation and Local Boards derive their funds in allotments from the District Councils. The District Boards in Berar have been lately invested with power to impose a special education cess.

The officers of the District Councils are frequently non-officials, but it is generally found convenient that the Tahsildar and Naib Tahsildar should be Chairman and Secretary of the Local Boards.

Rural education and sanitation are among the primary objects to which these bodies direct their attention and expenditure on famine relief is in the first instance a charge upon the District Council funds.

Finance.

The main sources of Government income in the province has always been the land revenue, but under Mahratta rule many petty imposts were added in all branches of trade and industry and life in general. Thus there was a special tax on the marriage of Banias and a tax of a fourth of the proceeds of the sale of houses. The scheme of Provincial finance was introduced in 1871-72. Special settlements under this system have been necessitated in view of the special circumstances of the province and the recurrence of famine, which a few years ago caused a severe economic strain upon the province. The wave of prosperity which has spread over the country in the past 14 years, since the end of the previous period, has more than trebled the funds available for the administration, compared with what they were before the several years of scarcity, and the progress of the administration and of expenditure has increased correspondingly, without any increase of taxation under provincial heads.

Public Works.

The Public Works Department is controlled by two Chief Engineers, who are also Secretaries to the Chief Commissioner. There are three Superintending Engineers for roads and buildings and three for irrigation. In 1892 a separate division of the Public Works Department was formed for the construction of roads and buildings in the Feudatory States but it has since been abolished. The expansion of the department and its work has been one of the most remarkable features of the administration in the past decade and a half, largely owing to the demands of a progressive age in regard to communications and new buildings. The Irrigation Branch of the P. W. D. represents a completely new departure. It was formerly the accepted view that the irregular surface of the country would make irrigation canals impossible and that the S. W. monsoon was so regular that it would pay better to relieve famine than to prevent it. Both conclusions have been reversed. Picked officers investigated projects for irrigation when the Irrigation Commission was appointed (1901) and canal and storage works have since been advanced with vigour. The Tandula, Wainganga and Mahanadi canal projects are amongst the more important schemes.

Police.

The police force was constituted in its present basis on the formation of the Provinces, the whole of which, including the Cantonments and

the Municipalities, is under one force. The strength is equal to one man per 10 square miles of area. The superior officers comprise an Inspector-General, whose jurisdiction extends over Berar, three Deputy Inspectors-General, for assistance in the administrative control and supervision of the Police force, including the Criminal Investigation Department, and the usual cadre of District Superintendents of Police, Assistant and Deputy Superintendents and subordinate officers. On railways special Railway Police are employed under the control of two Superintendents of Railway Police with headquarters at Raipur and Hosangabad. A Special Reserve of 600 men is distributed over the headquarters of seven districts, for use in dealing with armed disturbers of the peace in whatever quarter they may appear. The men in this reserve are regularly drilled and are armed with rifles. There is a small force of Mounted Police. The Central Provinces has no rural police as the term is understood in other parts of India. The village watch-man is the subordinate of the village headman and not a police official and it is considered very desirable to maintain his position in this respect.

Education.

The educational department was constituted in 1862 and the scheme then drawn up has remained the basis of the system of public education to the present day. The leading principles are that the department should content itself with the direct management of colleges and higher secondary schools, the training of teachers and inspection in work in rural areas. The maintenance of rural schools should as far as possible be left to the local authorities, every encouragement should be given to private philanthropy and no Government schools should be founded where there existed a sufficient number of institutions capable, with the assistance of the State, of supplying the local demand for instruction. At the head of the Department is the Director of Public Instruction, who has a staff of Assistant Director of Public Instruction, six Inspectors and two Inspectresses for girls schools. All these appointments are included in the Indian Educational Service, except two Inspectors who are in the Provincial Educational Service. An Agency Inspector supervises the schools of the Feudatory States. The province has five colleges: the Robertson and Training Colleges at Jubbulpore, and the Morris and Hislop Colleges and the Victoria College of Science at Nagpur. Sanction has also been accorded to the establishment of a Government College at Amraoti, the buildings of which are under construction. The Agricultural Department maintains an Agricultural College at Nagpur. The Colleges are affiliated to Allahabad University, but a demand has arisen for a local University.

After much preliminary discussion, a committee was appointed in July, 1914, to frame a scheme "which shall provide for a University of the teaching type at Nagpur, or in its immediate neighbourhood, and for the affiliation to this central institution of colleges situated in other places in the C. P. and Berar." The committee in their report, issued in 1915, proposed a University presenting some of the

features of an affiliating University but possessed of functions and endowed with responsibilities which transcend the scope of those universities in India which conform to that type. "For (says the report) it will not only be an examining but a teaching university, and its teaching activities will not be limited to the provision of courses of instruction for postgraduate degrees, but will embrace several departments of study in the lower courses. The main difference, however, between the university which we propose and existing universities will lie in the closer relations of the former with its constituent colleges. According to our scheme, the University will exercise an effective control over the teaching and discipline of all the institutions which come within its jurisdiction. For it is only by exercising control over its component parts that the Universities can maintain a high standard of moral and intellectual endeavour, and create traditions which will make themselves felt in the development of the Provinces as a whole."

The committee said: "The University which we propose will possess powers which will entitle it to a high place in the administrative machinery of the Provinces. But administrative autonomy involves a certain measure of financial independence, and we have made proposals accordingly. It is true that the University will be mainly dependent on the Government for financial support. Apart from fees, the University at first at any rate will have no resources of its own. But we confess to a desire to see it vested with financial control over the grant which it receives from Government as well as over its other receipts. If we may be permitted to employ a simile, the Government should regard the University as a business concern, of which it is a shareholder with a seat on the Board of Directors rather than as a servant to whom it makes certain payments, the disposal of which must be checked frequently and in detail."

"We recommend that the administration of the University be vested in a Chancellor, Vice-Chancellor, Senate and Syndicate. The Chief Commissioner of the Province will be the Chancellor. The Vice-Chancellor will be an honorary officer nominated by the Chancellor. The Senate will be the supreme authority, subject to the general control of the Government. It will be a body of 75 members, consisting partly of representatives of Government and of the general public, partly of elected representatives of the graduates and partly of teachers of the University and the constituent colleges, the latter being nominated by the Chancellor. The Syndicate will be the executive of the University, and will consist of the Vice-Chancellor, the Director of Public Instruction, a member of the Senate nominated by the Chancellor, four Principals of colleges, the Deans of the Faculties, and three members elected by the Senate from among their own number, of whom not more than one shall be a member of the teaching staff. The Chancellor's nominee on the Syndicate should be a person possessed of general administrative experience. In both these bodies the members of the teaching staff will predominate."

"After careful consideration, we have arrived at the conclusion that a university possessing

the wide administrative and educational powers which we propose must be governed by a body in which professional and expert opinion will predominate. This we think we have secured by giving the members of the teaching staff a predominant voice in the counsels of the University."

"We recommend that the University shall contain, at its inception, Faculties of Arts, Law and Science, and a department for the training of teachers subordinate to the Faculty of Arts. We have considered the question of establishing a Faculty of Agriculture. But in view of the necessity which the Government Department of Agriculture feels of pursuing a tentative policy for some years to come with regard to agricultural education, we feel that it would be inadvisable at the present juncture to suggest that the University should make provision for instruction in this branch knowledge. As to the Medical and Engineering Schools, they are designed to meet certain special needs, and do not aim at providing courses of a university standard. It will be many years before the demand for higher courses will justify the establishment of Faculties in Medicine and Engineering."

Until recent years, the demand for education, primary or secondary, was satisfied by a few institutions in the larger towns, while in the whole of the rural districts primary education had to be pressed on an apathetic and even obstructive agricultural population. The new spirit of progress in recent years has quickened the public pulse and the efforts of Government to effect improved facilities have responded accordingly. Special grants from the Government of India budget surpluses in recent years have largely been devoted to assisting the District Councils to overtake their arrears of primary school building. District Councils in general have allowed their zeal for education to carry them into programmes of development beyond their means.

Medical.

The medical and sanitary services of the province are respectively controlled by an Inspector-General of Civil Hospitals and a Sanitary Commissioner. The medical department has progressed along comparatively stereotyped lines. A striking advance has been made in recent years with urban sanitation. The principal medical institutions are the Mayo Memorial Hospital at Nagpur, opened in 1874, with accommodation for 84 in-patients; the Victoria Hospital at Jabulpore, opened in 1886 and accommodating 95 in-patients; the Lady Dufferin Hospital at Nagpur and the Lady Elgin Hospital at Jabulpore, these last two being for women and containing together accommodation for 71 in-patients. The province has one lunatic asylum at Nagpur. Vaccination is compulsory in some Municipal towns to which the Vaccination Act has been extended. The administration in 1913 sanctioned the opening of peripatetic dispensaries in unhealthy areas.

Administration.

Chief Commissioner, Sir Frank George Sly, K.C.S.I., I.C.S., (appointed, Dec. 1919).
Personal Assistant, Capt. P. H. Champion.

Chief Secretary, The Hon'ble Mr. F. S. A. Slocock, C.I.E., I.C.S.

Second Secretary, The Hon'ble Mr. H. C. Gowan, I.C.S.

Third Secretary, The Hon'ble Mr. J. F. Dyer, I.C.S.

Legal Secretary, The Hon'ble Mr. D. G. Mitchell, I.C.S.

Under Secretaries, Mr. G. V. Bewoor, I.C.S., and Mr. C. K. Seaman.

Registrar, C. E. Higher, (on special duty); R. W. Hart, Offg.

Secretary, Public Works Department (Irrigation Branch), Lieut.-Col. S. G. Rivett-Carnac, R. E.; (*Roads and Buildings*) Col. J. P. Blakeway, C. M. G., R. E.

Financial Commissioner, The Hon'ble Mr. H. A. Crump, C.S.I., I.C.S. (On combined leave.)

BERAR.

Commissioner, The Hon'ble Mr. B. P. Standen, C.I.E., I. C. S.

Members of Council.

NOMINATED MEMBERS.

The Hon'ble Mr. H. A. Crump, I.C.S.
 " " F. S. A. Slocock, I.C.S.
 " " F. C. Turner, I.C.S.
 " " D. G. Mitchell, I.C.S.
 " " K. S. Jatar, U.C.S.
 " Col. J. P. Blakeway, R. E.
 " Lieut.-Col. C. H. Bensley, I.M.S.
 " Mr. James Ferguson Dyer, I.C.S.
 Mr. Arthur Innes Mayhew,
 " Hyde Clarendon Gowan.
 " George Paris Dick.

NON-OFFICIALS.

The Hon'ble Mr. Niaz-ud-din Khan.
 " Sorabji Bezonji Mehta.
 " Rai Bahadur Sir Bipin Krishna Bose, Kt., C.I.E.
 " Rao Bahadur Madho Rao Ganesh Deshpande.

ELECTED MEMBERS.

The Hon'ble Mr. Moreswar Rao Dixit, B.A., Bar.-at-Law.
 " Rao Bahadur Narayan Rao Kelkar.
 " Mr. Pyare Lal Misra.
 " " Manoharpant Krishnarao Golwalkar.
 " Rai Sahib Govind Lal Purohit.
 " Rai Sahib Cullianji Murarji Thacker, Bar.-at-Law.
 " Mr. Beohar Raghubir Singh.
 " Shripad Balvant Tambe.
 " Rao Sahib Ramchandra Vishnu Mahajani.
 " Mr. Yeshwant Govind Deshpande.

MISCELLANEOUS APPOINTMENTS.

Director of Public Instruction, Mr. A. I. Mayhew.
Inspector-General of Police—Vacant.
Chief Conservator of Forests, Mr. B. B. Osmaston.
Inspector-General of Prisons, Sub. pro tem., Lt.-Col. C. H. Bensley.

Inspector-General of Civil Hospitals, and Sanitary Commissioner, The Hon'ble Col. C. R. M. Green, M.D., I. M. S. (On leave); Lt.-Col. C. H. Bensley, I. M. S. (Offg.).

Commissioner of Excise, Mr. A. E. Nelson, I.C.S.
Comptroller (Financial Dept.) R. Waterfield.

Postmaster-General, Mr. H. S. H. Pilkington, C. I. E., M.V.O.

Director of Agriculture and Industries, Officiating, David Clouston.

Registrar of Co-operative Credit Societies, Mr. A. E. Mathias, I.C.S.

CHIEF COMMISSIONERS.

Colonel E. K. Elliot	..	..	..	1861
Lieut.-Colonel J. K. Spence (<i>Officiating</i>)	..	..	..	1862
R. Temple (<i>Officiating</i>)	..	..	..	1862
Colonel E. K. Elliot	..	..	..	1863
J. S. Campbell (<i>Officiating</i>)	..	..	..	1864
R. Temple	..	..	..	1864
J. S. Campbell (<i>Officiating</i>)	..	..	..	1865
R. Temple	..	..	..	1865
J. H. Morris (<i>Officiating</i>)	..	..	..	1867
G. Campbell	..	..	..	1867
J. H. Morris (<i>Officiating</i>)	..	..	..	1868

Confirmed 27th May 1870.

Colonel R. H. Keatinge, v.c., C.S.I. (<i>Offg.</i>)	..	..	..	1870
J. H. Morris, C.S.I.	..	..	..	1872
C. Grant (<i>Officiating</i>)	..	..	..	1879
J. H. Morris, C.S.I.	..	..	..	1879
W. B. Jones, C.S.I.	..	..	..	1883
C. H. T. Crosthwaite (<i>Officiating</i>)	..	..	..	1884

Confirmed 27th January 1885.

D. Fitzpatrick (<i>Officiating</i>)	..	..	..	1885
J. W. Neill (<i>Officiating</i>)	..	..	..	1887
A. Mackenzie, C.S.I.	..	..	..	1887
R. J. Crosthwaite (<i>Officiating</i>)	..	..	..	1889

Until 7th October 1889.

J. W. Neill (<i>Officiating</i>)	..	..	..	1890
A. P. MacDonnell, C.S.I.	..	..	..	1891
J. Woodburn, C.S.I. (<i>Officiating</i>)	..	..	..	1891

Confirmed 1st December 1893.

Sir C. J. Lyall, C.S.I., K.C.I.E.	..	..	..	1895
The Hon'ble Mr. D. C. J. Ibbetson, C.S.I.	..	..	..	1898
" Sir A. H. L. Fraser, K.C.S.I.	..	..	..	1899

(*Officiating*) Confirmed 6th March 1902.

The Hon'ble Mr. J. P. Hewett, C.S.I., C.I.E.	..	..	..	1902
(<i>Officiating</i>) Confirmed 2nd November 1903.	..	..	..

The Hon'ble Mr. F. S. P. Lely, C.S.I., K.C.I.E.	..	..	..	1904
(<i>Officiating</i>) Confirmed 23rd Dec. 1904.	..	..	..

The Hon'ble Mr. J. O. Miller, C.S.I.	..	..	..	1905
S. Ismay, C.S.I. (<i>Officiating</i>)	..	..	..	1906

Until 21st October 1906.

F. A. T. Phillips (<i>Officiating</i>)	1907
--	----	----	----	------

Until 24th March 1907. Also from 20th

May to 21st November 1909

The Hon'ble Sir R. H. Craddock, K.C.S.I.	1907
--	----	----	----	------

The Hon'ble Mr. H. A. Crump, C.S.I.	1912
-------------------------------------	----	----	----	------

Sub pro tem. from 26th January 1912 to 16th February.

The Hon'ble Mr. W. Fox-Strangways, C.S.I.	..	..	..	1912
(Sub. pro tem.)	..	..	..

The Hon'ble Sir B. Robertson, K.C.S.I., C.I.E.	1912
--	----	----	----	------

" Mr. Crump, C.S.I. (<i>Officiating</i>)	1914
--	----	----	----	------

" Sir B. Robertson, K.C.S.I.	1914
------------------------------	----	----	----	------

" Sir Frank George Sly, K.C.S.I., I.C.S.	1919
--	----	----	----	------

North-West Frontier Province.

The North-West Frontier Province, as its name denotes, is situated on the north-west frontier of the Indian Empire. It is in form an irregular strip of country lying north by east and south by west and may generally be described as the tract of country, north of Baluchistan, lying between the Indus and the Durand boundary line with Afghanistan. To the north it extends to the mountains of the Hindu Kush. From this range a long broken line of mountains runs almost due south, dividing the province from Afghanistan, until the Sulaiman Range eventually closes the south of the Province from Baluchistan. The greatest length of the province is 403 miles, its greatest breadth 279 miles and its total area about 39,000 square miles. The territory falls into three main geographical divisions: the Cis-Indus district of Hazara; the narrow strip between the Indus and the Hills, containing the Districts of Peshawar, Kohat, Banu and Dera Ismail Khan, and the rugged mountainous regions on the north and west between those districts and the border line of Afghanistan. Hazara and the four districts in the second division contain 13,418 square miles. The mountain regions, north and west, are occupied by tribes subject only to the political control of the Chief Commissioner in his capacity as Agent to the Governor-General. The area of this tract is roughly 25,500 square miles and in it are situated, from north to south, the political agencies severally known as the Malakand, Khyber, Kurram, Tochi and Wana Agencies. Each of the Deputy Commissioners of the five administered districts is responsible for the management of political relations with certain tribes or sections of the tribes across the frontier. A few hundred miles of the trans-border Territory are internally administered by the Political Agents, but the bulk of the trans-border population is free from any internal interference, so long as offences are not committed and so long as the tribes observe the conditions on which allowances are paid to many of them.

The area of the Province is a little more than half that of Bombay (excluding Sind and Aden) and amounts to more than three-fifths of the size of England without Wales. The density of population throughout the Province equals 98 persons to a square mile, but in the more favoured portions the pressure of population is much greater. In the Hazara District there are 207 persons to a square mile and in the trans-Indus plains tract the number is 152. The key to the history of the people of the N.-W. F. P. lies in the recognition of the fact that the valley of Peshawar was always more closely connected politically with Eastern Iran than with India, though in pre-Mahomedan times its population was mainly Indian by race. Early history finds the Iranians dominating the whole Indus valley. Then came the Greek invasion under Alexander the Great, in B.C. 327, then the invasions of the Sakas, and of the White Huns, and later, the two great waves of Muhammadan invasion. Last came the Sikh invasion, beginning in 1818. The Frontier Territory was annexed by the British in 1849 and placed under the control of the Punjab Government. Frequent

warfare occurred with the border tribes, but since the conclusion of peace with the Afridis in 1898, the whole border has been undisturbed except for the expedition against the Zakka Khel Afridis in 1908 and the recent blockade of Mohmand of 1916-17 and Waziristan Expedition of 1917.

The division of the Frontier Province from the Punjab was frequently discussed, with the double object of securing closer and more immediate control and supervision of the Frontier by the Supreme Government and of making such alterations in the personnel and duties of frontier officials as would tend to the establishment of improved relations between the local British representatives and the independent tribesmen. The province was eventually removed from the control of the Punjab administration in 1901. To it was added the political charge of Dir, Swat and Chitral, the Political Agent of which had never been subordinate to the Punjab. The new Province was constituted under a Chief Commissioner and Agent to the Governor-General, with headquarters at Peshawar, in direct communication with the Government of India in the Foreign Department. In political questions there is no intermediary between the Chief Commissioner and the local officer; an arrangement designed to secure both prompt disposal of references and the utilisation of the expert knowledge of frontier conditions for which the head of the administration is selected.

The People.

The total population of the N.-W.F.P. (1911) is 3,819,027, made up as follows:—

Hazara	603,028
Trans-Indus Districts	1,593,905
Trans-Border Area	1,622,094

This last figure is estimated. There are only 625.6 females per 1,000 males in the towns and 900 females per 1,000 males in rural areas. This disproportion of the sexes cannot at present be explained in the N.-W.F.P. any more than in other parts of Northern India, where it also appears. The discrepancy is greater here than in any other Province of India. There is no ground for believing that the neglect of girls in infancy has any effect in causing the phenomenon. On the other hand, the female population has to face many trials which are unknown to men. The evils of unskilled midwifery and early marriage are among them. Both the birth and death-rates of the Province are abnormally low. The birth rate in the administered districts, according to the last available official reports, is 35.1 and the death-rate 33.3. There were 122.5 male births for every 100 females. It is recognised that in this matter, and in regard to population generally, the registration of females may be defective, inasmuch as the Pathan, for whatever reasons, regards the birth of a daughter as a misfortune, the less said about which the better. The population is naturally increasing, but emigration reduces the net result.

The dominant language of the Province is Pashtu and the population contains several lingual strata. The most important sections of the population, both numerically and by social position, are the Pathans, They own

a very large proportion of the land in the administered districts and are the ruling race, of the tribal area to the west. There is a long list of Pathan, Baluch, Rajput and other tribal divisions. Gurkhas have recently settled in the Province. The Mahomedan tribes constitute almost the whole population, Hindus amounting to only 5 per cent. of the total and Sikhs to a few thousands. The occupational cleavage of the population confuses ethnical divisions.

Under the North-West Frontier Province Law and Justice Regulation of 1901, custom governs all questions regarding successions, betrothal, marriage, divorce, the separate property of women, dower, wills, gifts, partitions, family relations such as adoption and guardianship, and religious usages and institutions, provided that the custom be not contrary to justice, equity or good conscience. In these matters the Mahomedan or Hindu law is applied only in the absence of special custom.

Climate, Flora and Fauna.

The climatic conditions of the N.-W.F.P., which is mainly the mountainous region, but includes the Peshawar Valley and the riverine tracts of the Indus in Dera Ismail Khan District, are extremely diversified. The latter district is one of the hottest areas of the Indian continent, while on the mountain ranges the weather is temperate in summer and intensely cold in winter. The air is generally dry and hence the annual ranges of temperature are frequently very large. The Province has two wet seasons, one the S.-W. Monsoon season, when moisture is brought up from the Arabian Sea and the Bay of Bengal: the other in winter, when storms from Mesopotamia, Persia and the Caspian Districts bring widespread rain and snowfall. Both sources of supply are precarious and not infrequently either the winter or the summer rainfall fails almost entirely. The following description of the Daman, the high ground above the Indus, stretching across Dera Ismail Khan to the mountains on the west, occurs in an account written some years ago by Captain Croswait: "Men drink once a day and the cattle every second day. Washing is an impossible luxury. . . . It is possible in the hot weather to ride thirty miles and neither hear a dog bark nor see the smoke of a single fire." With the exception of the Kunhar River, in Hazara, which flows into the Jhelum, the whole territory drains into the Indus. The flora of the Province varies from the shrubby jungle of the south-eastern plains to barren hills, pine forests and fertile mountain valleys. Tigers used to abound in the forests but are now quite extinct; leopards, hyenas, wolves, jackals and foxes are the chief carnivora. Bear, deer and monkeys are found; a great variety of fish is caught in the Indus.

The mountain scenery is often magnificent. The frontier ranges contain many notable peaks of which the following are the principal:

Takht-i-Sulaiman, Sulaiman Range, in Dera Ismail Khan, 11,292 feet.

Pir Ghal, Sulaiman Range, in Mahsud Waziristan, 11,583 feet.

Sika Ram, in the Safed Koh, in the Kurram Agency, 15,621 feet.

Kagan Peaks of the Himalayas, in the Hazara District, 10,000 to 16,700 feet.

Istragh Peak (18,900 ft.), Kachin Peak 22,641 ft.), Tirich Mir (25,426 ft.), all in the Hindu Kush, on the northern border of Chitral Agency.

Trade and Occupations.

The population derives its subsistence almost wholly from agriculture. The Province is practically without manufactures. There is no considerable surplus of commercial products for export. Any commercial importance which the province possesses it owes to the fact that it lies across the great trade routes which connect the trans-border tribal territories and the marts of Afghanistan and Central Asia with India, but the influence of railways is diminishing the importance of these trading interests. The travelling traders (or Powindahs) from the trans-frontier area have always pursued their wanderings into India and now, instead of doing their trading in towns near the border, carry it by train to the large cities in India. Prices of agricultural produce have in recent years been high, but the agriculturists, owing to the poverty of the means of communication, have to some extent been deprived of access to Indian markets and have therefore been unable to profit by the rates prevailing. On the other hand, high prices are a hardship to the non-agricultural classes. The effects of recent extensions of irrigation have been important. Land tenures are generally the same in the British administered districts as in the Punjab. The cultivated area of the land amounts to 32 per cent. and uncultivated to 68 per cent.

The work of civilisation is now making steady progress. Relations with the tribes have improved, trade has advanced, free medical relief has been vastly extended, police administration has been reformed and the desire of people for education has been judiciously and sympathetically fostered. In the British administered districts 19 per cent. males and 7 per cent. females of the total population are returned as literates. The figures for males denote a very narrow diffusion of education even for India. Those for females are not notably low, but they are largely affected by the high literacy amongst Sikh women, of whom 13·3 per cent. are returned as literate. The inauguration of a system of light railways throughout the Province, apart from all considerations of strategy, must materially improve the condition of the people and also by that means strengthen the hold of the administration over them. The great engineering project of the Upper Swat River Canal, which was completed in 1914, and the lesser work of the Paharpur Canal, also completed a year or two ago, will bring ease and prosperity to a number of peasant homes. There has arisen in recent years the difficult question of the importation of thousands of rifles from the Persian Gulf. Elaborate measures were taken to stamp out the traffic, under the direction of the Naval Commander-in-Chief in the East Indies; and with the tardy consent of France, an agreement was made with the Sultan of Muscat, to stop the trade in arms from that place, Muscat having been the entrepot for the traffic.

Administration.

The administration of the North-West Frontier Province is conducted by the Chief

Commissioner and Agent to the Governor-General in Council. His staff consists of—

- (1) Officers of the Political Department of the Government of India.
- (2) Members of the Provincial Civil Service.
- (3) Members of the Subordinate Civil Service.
- (4) Superintendents and Assistant Superintendents of Police.
- (5) Officers recruited for the service of departments requiring special knowledge—Militia, Engineering, Education, Medicine and Forestry.

The cadre posts reserved for officers coming under the first head above are:—

Administration.	Chief Commissioner & Agent to the Governor-General	5
	Secretary	
	Assistant Secretary	
	Personal Assistant	
	Revenue Commissioner and Revenue Secretary	
	Resident in Waziristan...	1
	Deputy Commissioners ..	5
	Political Agents ..	5
	District Judges ..	2
	Assistant Commissioners and Assistant Political Agents	13
High Court and Divisional Judges.	One Judicial Commissioner.	4
	Two Divisional and Sessions Judges.	
	One Additional ditto.	

The districts under the Deputy Commissioners are divided into from two to five sub-collectorates, in charge of tahsildars, who are invested with criminal and civil and revenue powers, and are assisted by naib-tahsildars, who exercise only criminal and revenue powers. Some sub-divisions are in charge of Assistant or Extra Assistant Commissioners. The village community characteristic of some parts of India is not indigenous among the Pathans. Its place as a social unit is to some extent taken by the tribe, which is held together by the ties of kinship and ancient ancestry, real or imaginary. Modern municipal local government has been introduced in the towns. There are also district boards. The district is the unit for police, medical and educational administration and the ordinary staff includes a District Superintendent of Police, a Civil Surgeon, who is also the Superintendent of Jail and a District Inspector of Schools. The Province forms a single educational circle and only possesses one forest division, that of Hazara. There are four divisions of the Roads and Building Branch of the Public Works Department, each under an Executive Engineer. The Irrigation Department of the P. W. D. is in charge of a Chief Engineer, Irrigation, who is also *ex-officio* Secretary to the Chief Commissioner. The administration of the civil police force of the districts is vested in an Inspector-General. There is a special force of Frontier Constabulary. The revenue and expenditure of the Province are wholly Imperial. Of the Agencies only Kurram and

Tochi Valley pay land revenue to the British Government. The revenue administration of all five administered districts is controlled by the Revenue Commissioner. For the administration of civil and criminal justice there are two Civil and Sessions divisions, each presided over by a Divisional and Sessions Judge. The Judicial Commissioner is the controlling authority in the Judicial branch of the administration, and his Court is the highest criminal and appellate tribunal in this Province. The principal officers in the present Administration are:—

Agent to the Governor General and Chief Commissioner, The Hon'ble Sir Alfred Hamilton Grant, K.C.I.E., C.S.I., I.C.S., (assumed charge, 10th September 1919).

Resident Waziristan, The Hon'ble Sir John Donald, K.C.I.E., C.S.I. (on leave).

Judicial Commissioner, F. P. Rennie, I.C.S.
Revenue Secretary, S. E. Pears, C.I.E., I.C.S.

Secretary to Chief Commissioner, E. H. Kealy, I.C.S.

Assistant Secretary to Chief Commissioner, J. R. Makeig-Jones, I.C.S.

Assistant Financial Secretary to Chief Commissioner, Bhai Sunder Singh.

Indian Personal Assistant to Chief Commissioner, Khan Bahadur Sadulla Khan.

Inspecting Officer Frontier Corps, Major A. C. Tancock, I.A.

Secretary, Public Works Department, Buildings and Roads Branch, Col. H. A. D. Fraser, R.E.

Secretary, Public Works Department, Irrigation Branch, F. W. Carne.

Chief Medical Officer, Lieut.-Col. J. H. Hugo, D.S.O., I.M.S.

Inspector-General of Police, E. W. Tomkins, O.B.E., (offg.)

Commandant, Frontier Constabulary, R. C. Boyle.
Director of Public Instruction, C. E. W. Jones, M.A.

Superintendent, Archaeological Survey, H. Hargreaves; K. S. Mian Wasiuddin (offg.).

Divisional and Sessions Judges, Lieut.-Col. C. F. Minchin, D.S.O., I.A., (Derajat), T. B. Copeland, I.C.S., (Peshawar), Major R. A. Yule (Additional Sessions Judge, Peshawar).

Vice-President, Provincial Recruiting Board and Special Recruiting Officer, S. E. Pears, C.I.E.

Political Agents.

Major J. A. Brett, Dir, Swat and Chitral.

Major F. H. Humphrys, Khyber.

Major R. Garratt, Tochi.

Major R. J. W. Heale, Kurram.

Major C. G. Crosthwaite, O.B.E., Wana.

Deputy Commissioners.

Major G. F. W. Anson (offg.), Peshawar.

Major C. W. Prescott, Bannu.

C. Latimer, I.C.S., Dera Ismail Khan.

Major R. E. H. Griffith, C.I.E., Kohat.

J. H. R. Fraser, O.B.E., I.C.S., Hazara.

Former Chief Commissioners.

Lieut. Col. Sir Harold Deane, K.C.S.I., Died 7th July 1908.

Lieut.-Col. Sir George Roos-Keppel, G.C.I.E., K.C.S.I., to 9th September 1919.

Assam.

The Province of Assam, 61,682 square miles in area, includes the Assam Valley Division, the Surma Valley and Hills Division and the State of Manipur. It owes its importance to its situation on the north-east frontier of India. It is surrounded by mountainous ranges on three sides while on the fourth (the west) lies the Province of Bengal on to the plains of which debouch the two valleys of the Brahmaputra and the Surma which form the plains of Assam. These two valleys are separated from each other by the Assam Range, which projects westward from the hills on the eastern border.

Population.

The total population of the province in 1911 was 7,059,857, of whom $1\frac{1}{2}$ millions were Mahomedans, $\frac{3}{4}$ millions Hindus and $\frac{1}{4}$ millions Animists. 46 per cent. of the population speak Bengali, 22 per cent. speak Assamese; other languages spoken in the province are Hindi, Uriya, and a great variety of languages classified under the general heading of the Tibeto-Chinese languages. Owing to the great areas of waste and rivers the density of the province is only 115, which, compared with that of most other parts of India, is low, but is more than double that of Burma.

Agricultural Products.

It has agricultural advantages for which it would be difficult to find a parallel in any part of India, climate, soil, rainfall and river systems all being alike favourable to cultivation. Rice is the staple food crop, nearly 5 million acres being devoted to this crop. In 1917-18 the outturn of rice was 1,584,924 tons. Except in the Himalayan Terai irrigation is unnecessary. Jute and tea are the most important crops grown for export; the area under jute in 1917-18 being 100,324 acres that under tea about 399,690 acres. The number of tea gardens in 796, the production being about 243 million lbs. Wheat and tobacco are also grown and about 30 square miles are devoted to sugarcane. The total area of 'reserved' forest is about 5,381 square miles and the unclassified state forests cover about 18,509 square miles.

Meteorological Conditions.

Rainfall is everywhere abundant, and ranges from 93 to 124 inches. The maximum is reached at Cherapunji in the Khasi Hills, which is one of the wettest places in the world, having a rainfall of 453 inches. The temperature ranges from 59° at Sibsaigar in January to 84° in July. Earthquakes of considerable severity have taken place, by far the worst being that which occurred in 1897.

Land Tenures.

Most of the actual cultivators of the soil usually hold direct from the State, and the area of land on which rent is paid is inconsiderable. A large part of Goalpara and of the more densely populated portions of Sylhet was however included in the permanent settlement of Bengal; and the system of land tenure in Cachar, and the existence of large estates on privileged rates of revenue in Kamrup have tended to produce a tenant class which at the 1901 census amounted to more than one-third of the total number of persons supported by

agriculture. In the 1911 census a very marked increase in tenancy throughout the Province is shown.

The Assam Labour and Emigration (Amendment) Bill was passed on the 24th March 1915. The Act carries with it the abolition of the recruiting contractor and the creation of a Labour Bureau to supervise recruiting.

Mines and Minerals.

The only minerals in Assam worked on a commercial scale are coal, limestone and petroleum oil. The most extensive coal measures are in the Naga Hills district, where about 300,000 tons are raised annually and used mainly by the river steamers. Limestone is quarried in the Khasi and Jaintia Hills, in Sylhet, and in the Gare hills. Petroleum is worked only in Lakimpur.

An account of the petroleum occurrences in Assam was recently published in the memoirs of the Geological Survey of India. It states that the petroleum localities in this province are confined to a curved belt of country along the basins of the Brahmaputra and Surma. This belt is traceable over a distance of some 800 miles from N.E. Assam through Kachar and Chittagong to the Arakan coast, where it has a S.S.E. trend. It is roughly concentric with the trend of the Burmese oil belt, the distance between the two varying from 70 to 150 miles.

Manufactures and Trade.

Silk is manufactured in the Assam Valley, the weaving being done by the women. Cotton weaving is also largely practised by the women, and almost every house contains a loom; the cloth is being gradually displaced by imported goods of finer texture and colour. Boat building, brass and metal and earthenwares, tea manufacture and limestone burning are the other industries apart from agriculture, which itself employs about 84 per cent. of the population. Assam carries on a considerable trade with the adjoining foreign tribes and countries. The total value of **imports** during 1918-19 amounted to Rs. 8,88,200 against Rs. 16,79,915 in the previous year, showing a decrease of Rs. 7,91,715 or 47.1 per cent. The total value of **exports** was Rs. 9,56,243 against Rs. 16,54,952 in the preceding year, the decrease being Rs. 6,98,709 or 42.2 per cent. The value of the total trade with Bhutan was Rs. 10,49,577 during the year under report as against Rs. 26,50,290 in the preceding year. The exclusion of the trade registered at Tambulpur and the prevalence of influenza in the hills are mainly responsible for this decrease. The import trade of Bhutan declined from Rs. 13,79,665 to Rs. 5,61,228.

Communications.

The trade of Assam is chiefly carried by river, but increasing use is being made of the Assam Bengal Railway which runs from the port of Chittagong to Silchar at the eastern end of the Surma Valley. A branch of that line runs along the south of the Assam Valley from Gauhati to Tinsukia, a station on the Dibru-Sadiya Railway, and is connected with the Surma Valley branch by a line that pierces

the North Cachar Hills, the points of junction being Lumding in the northern and Badarpur in the southern valley. The Eastern Bengal State Railway connects Assam with the Bengal system *via* the valley of the Brahmaputra. The excellence of its water communication makes Assam less dependent upon roads than other parts of India; but in recent years the road system has been developed and there is a trunk road through the whole length of the Brahmaputra Valley and an excellent road from Gauhati to Shillong. A large fleet of steamers maintained by the India General Steam Navigation Company and the Rivers Steam Navigation Company plies on the rivers of both valleys. A daily service of passenger boats runs from Goalundo to Dibrugarh.

Finance.

The total revenue realised within the province during 1917-18 was Rs. 1,93,07,374, the imperial receipts being Rs. 62,10,543 and provincial receipts Rs. 1,30,96,831. An assignment of Rs. 18,43,724, which was made from imperial to provincial funds, brought the nett provincial income to Rs. 1,49,40,555. The imperial assignment being left out of account the provincial receipts expanded by Rs. 2,94,525. Receipts from land revenue owing to the recovery of large arrears of 1916-17 when suspensions of payment were necessitated by floods, increased by Rs. 2,71,507; those from forests by Rs. 1,61,334, and those from income-tax by Rs. 75,438. On the other hand, excise revenue fell by Rs. 1,67,248, and receipts from stamps and registration also declined in sympathy with general economic conditions. The total provincial expenditure was Rs. 1,43,29,234, rather over a lakh less than in 1916-17. The province commenced the year with a balance of Rs. 21,20,213 and closed it with one of Rs. 27,31,534.

Education.

There are in the Province at present 4,619 educational institutions including two Arts Colleges with 221,469 students. Of the total population 333,672 are returned as literate. The distribution of literacy naturally varies considerably throughout the Province. The large number of immigrant coolies and of aboriginal tribes tends to lower the proportion of literates in the Brahmaputra Valley, and a comparatively high standard of literacy in the Hills is due mainly to the progress of education amongst the Khasis of whom a large proportion have been converted to Christianity. Amongst the Animists in the Hills the Lushais seem to have an extraordinary keenness for learning, which is the more remarkable, because the administration of their district dates from quite recent times.

Administration.

The province of Assam was originally formed in 1874 in order to relieve the Lieutenant-Governor of Bengal of part of the administration of the huge territory then under him. In 1903, as the result of further deliberations, it was decided to add to the small Province of Assam the eastern portion of its unwieldy neighbour and to consolidate those territories under a Lieutenant-Governor. The Province of Eastern Bengal and Assam as then constituted was again broken up on the 1st of April, 1912: the Eastern Bengal Districts were united with the Bengal Commissionerships

of Burdwan and the Presidency to form the Presidency of Bengal under a Governor-in-Council, Bihar, Chota Nagpur and Orissa were formed into a separate province, while the old Province of Assam was re-constituted under a Chief Commissioner.

The capital is Shillong, a town laid out with great taste and judgment among the pine woods on the slopes of the Shillong Range which rises to a height of 6,450 feet above the sea. It was destroyed in the earthquake of 1897 and has been rebuilt in a way more likely to withstand the shocks of earthquake.

Chief Commissioner, The Hon. Sir Nicholas Dodd Beatson Bell, K.C.I.E., C.S.I., appointed 1st April 1918.

Personal Asst., Captain H. R. Harington, I.A.

Chief Secretary, J. E. Webster, C.I.E.

Second Secretary, A. R. Edwards.

Secretary, Public Works Department, F. E. Bull.

Inspector General of Registration, S. N.

Mackenzie, I.C.S.

Judges, Abdul Majid on leave, Henry Crawford Liddell.

Director of Public Instruction, J. R. Cunningham.

Inspector-General of Police, Lt.-Col. D. Herbert.

Sanitary Commissioner, Major T. C. M. Young, M.B., I.M.S.

Comptroller, Financial Department, Philip Gordon Jacob, B.A.

Political Agent in Manipur, Lieut.-Col. H. W. G. Coie.

Superintendent and Remembrancer of Legal Affairs, Abdul Majid, B.A.

Director of Land Records and Agriculture, J. McSwiney.

Senior Inspector of Factories, E. R. Powell.

LEGISLATIVE COUNCIL.

Lieut.-Col. D. Herbert, J. E. Webster, C.I.E., A. Mellor, Abdul Majid, Colonel J. Garvie, A. R. Edwards, O. H. Desenne, F. W. Sudmerson, Munshi Riaz Baksh, Rajendra Narayan Chaudhuri, Rai Nalini Kanta Ray Dastidar Bahadur, A. B. Hawkins and C. H. Holder.
Elected Members.

Rai Ghanasym Barua, Bahadur; Babu Ramani Mohan Das; R. St. J. Hickman; Maulvi Saiyid Abdul Majid, Khan Bahadur; Muhammad Bakht Mazumdar, Khan Bahadur; Maulvi Saiyid Muhammad Saadulla; H. B. Fox; A. L. Playfair; Rai Krishna Kumar Barua; Sriyut Chandradhar Barua; and Rai Nagendra Nath Chaudhari, Bahadur.

Chief Commissioners of Assam.

Colonel R. H. Keatinge, C.S.I.	..	..	1874
Sir S. C. Bayley, K.C.S.I.	..	..	1878
C. A. Elliot, C.S.I.	..	..	1881
W. E. Ward	..	..	1883
Dennis Fitzpatrick, C.S.I.	..	..	1887
J. Westland, C.S.I.	..	..	1889
J. W. Quinton, C.S.I.	..	..	1889
Brig.-General Sir H. Collett, K.C.B.	..	..	1891
W. E. Ward, C.S.I.	..	..	1891
C. J. Lyall, C.S.I.	..	..	1894
H. J. S. Cotton, C.S.I.	..	..	1896
J. B. Fuller, C.I.E.	..	..	1900
J. B. Fuller, C.I.E.	..	..	1902
C. W. Bolton, C.S.I.	..	..	1903
<i>Note</i> .—The Chief Commissionership of Assam was revived 1st April 1912			
Sir Archdale Earle, K.C.I.F.	..	..	1912
Sir Nicholas Dodd Beatson Bell, K. C.I.E., C.S.I.	..	..	1918

Baluchistan.

Baluchistan is an oblong stretch of country occupying the extreme western corner of the Indian Empire. It is divided into three main divisions; (1) British Baluchistan with an area of 9,476 square miles consisting of tracts assigned to the British Government by treaty in 1879; (2) Agency Territories with an area of 44,345 square miles composed of tracts which have, from time to time, been acquired by lease or otherwise brought under control and placed directly under British officers; and (3) the Native States of Kalat and Las Bela with an area of 78,434 square miles. The Province embraces an area of 134,638 square miles and according to the census of 1911 it contains 834,703 inhabitants, divided roughly half and half between the administered districts and States.

The country, which is almost wholly mountainous, lies on a great belt of ranges connecting the Safed Koh with the hill system of Southern Persia. It thus forms a watershed the drainage of which enters the Indus on the east and the Arabian Sea on the south while on the north and west it makes its way to the inland lakes which form so large a feature of Central Asia. Rugged, barren, sun-burnt mountains, rent by high chasms and gorges, alternate with arid deserts and stony plains, the prevailing colour of which is a monotonous sight. But this is redeemed in places by level valleys of considerable size in which irrigation enables much cultivation to be carried on and rich crops of all kinds to be raised.

The political connection of the British Government with Baluchistan commenced from the outbreak of the First Afghan War in 1839; it was traversed by the Army of the Indus and was afterwards occupied until 1842 to protect the British lines of communication. The districts of Kachi, Quetta and Mastung were handed over to the Amir of Afghanistan and Political Officers were appointed to administer the country. At the close of the First Afghan War, the British withdrew and these districts were assigned to the Khan of Kalat. The founder of the Baluchistan Province as it now exists was Sir Roberts Sandeman who broke down the close border system and welded the Baluch and Brahui Chiefs into a close confederacy. In the Afghan War of 1879 Pishin, Sibi, Harnai and Thal-Chotiali were handed over by Yakub Khan to the British Government and retained at Sir Robert Sandeman's strenuous insistence.

Industries.

Baluchistan lies outside the monsoon area and its rainfall is exceedingly irregular and scanty. Shahrig which has the heaviest rainfall, records no more than 11½ inches in a year. In the highlands few places receive more than 10 inches and in the plains the average rainfall is about 5 inches, decreasing in some cases to 3. The majority of the indigenous population are dependent for their livelihood on agriculture, provision and care of animals and transport. The Afghan and the Baluch, as

a rule, cultivate their own lands. The Brahuis dislike agriculture and prefer a pastoral life. Previous to the advent of the British life and property were so insecure that the cultivator was fortunate if he reaped his harvest. The establishment of peace and security has been accompanied by a marked extension of agriculture which accounts for the increase in the numbers of the purely cultivating classes. The Mekran Coast is famous for the quantity and quality of its fish and the industry is constantly developing. Fruit is extensively grown in the highlands and the export is increasing.

Education is imparted in 194 schools with 5,284 scholars. There is a distinct desire for education amongst the more enlightened headmen round about Quetta-Pishin and other centres where the Local Government with its officers stays at certain seasons, such as Sibi and Ziarat; but on the whole education or the desire of it has made little or no advance in the outlying districts. The mineral wealth of the Province is believed to be considerable, but cannot be exploited until railways are developed. Coal is mined at Khost on the Sind-Pishin railway and in the Bolan Pass. Chromite is extracted in the Quetta-Pishin District, but the industry awaits the extension of the railway from Khanai to Hindubagh for its adequate exploitation. Lime-stone is quarried in small quantities. An oil-prospecting licence has been granted by the Las Bela State to the Burma Oil Company.

Administration.

The head of the local administration is the officer styled Agent to the Governor-General and Chief Commissioner. Next in rank comes the Revenue Commissioner who advises the Agent to the Governor-General in financial matters and generally controls the revenue administration. The keynote of administration in Baluchistan is self-government by the tribesmen, as far as may be, by means of their Jirgas or Councils of Elders along the ancient customary lines of tribal law, the essence of which is the satisfaction of the aggrieved and the settlement of the feud, not retaliation on the aggressor or the vindictive punishment of a crime. The district levies which normally numbered 2,300 odd play an unobtrusive but invaluable part in the work of the Civil Administration not only in watch and ward and the investigation of crime, but also in the carrying of the mails, the serving of processes and other miscellaneous work. In addition to these district levies there are ordinarily three irregular Corps in the Province; the Zhob Militia (formerly known as the Zhob Levy Corps), the Makran Levy Corps, and the Chagai Levy Corps. Their combined strength in the latest returns was 953 cavalry and 892 infantry. The Province does not pay for itself and receives large subsidies from the Imperial Government. The receipts and expenditure roughly balance each other at 29 lakhs. The land revenue demanded is about Rs. 12 lakhs annually.

ADMINISTRATION.

Agent to the Governor-General and Chief Commissioner, The Hon'ble Lt. Col. A. B. Dew, C.S.I., C.I.E.

Offg. Revenue and Judicial Commissioner, Lt.-Col. A. D. G. Ramsay, C.I.E., O.B.E.

Secretary, Public Works Department, Brig.-General J. A. Dealy, C.M.G., D.S.O.

First Assistant to the Agent to the Governor-General and Secretary to the Chief Commissioner, Major R. H. Chenevix-Trench.

Political Agent, Zhob, Lieut.-Colonel A. L. Jacob, I.A.

Political Agent, Kalat and Bolan Pass, J. E. G. Acheson, I.C.S.

Assistant for Mekran to the Political Agent in Kalat and ex-officio Commandant, Mekran Levy Corps, C. H. Gidney, I.C.S.

Political Agent and Deputy Commissioner, Quetta, Lt.-Col. H. L. Stewart, C.I.E.

Assistant Political Agent and Assistant Commissioner, Quetta, T. H. Davies, I.C.S.

Political Agent, Chagai, Major W. G. Hutchinson, I.A.

Political Agent and Deputy Commissioner, Sibi, Captain H. C. Finnis.

Assistant Political Agent, Sibi, Captain C. E. U. Bremner.

Political Agent, Loralai, Major C. E. Bruce, I.A.

Residency Surgeon and Chief Medical Officer, Dr. S. Gaster.

Civil Surgeon, Sibi, J. A. Guizelar.

ANDAMAN AND NICOBAR ISLANDS.

This is a group of islands in the Bay of Bengal of which the headquarters are at Port Blair, by sea 780 miles from Calcutta, 740 miles from Madras and 360 miles from Rangoon, with which ports there is regular communication.

The land area of the islands under the administration is 3,143 square miles, namely, 2,508 square miles in the Andamans and 635 square miles in the Nicobars. The total population of the islands was returned in the census of 1911 as 26,459. The Islands are administered by the Chief Commissioner of the Andaman and Nicobar Islands who is also the Superintendent of the Penal Settlement. The penal settlement, which was established in 1858, is the most important in India.

Superintendent of Port Blair, Lieut.-Col. M. W. Douglas, C.I.E.

Acting Commandant and District Superintendent of Military Police, B. T. Roussac.

Medical Superintendent of Jails, and Senior Medical Officer, Major J. H. Murray, I.M.S.

COORG.

Coorg is a small petty Province in Southern India west of the State of Mysore. Its area is 1,582 square miles and its population 174,976. Coorg came under the direct protection of the British Government during the war with Sultan Tipu of Seringapatam. In May 1834, owing to misgovernment, it was annexed. The Province is directly under the Government of India and administered by the Chief Commissioner of Coorg who is the Resident in Mysore with his headquarters at Bangalore. In him are combined all the functions of a local government and a High Court. The Secretariat is at Bangalore where the Assistant Resident is styled Secretary to the Chief Commissioner of Coorg. In Coorg his chief authority is the Commissioner whose headquarters are at Mercara and whose duties extend to every branch of the administration. The chief wealth of the country is agriculture and especially the growth of coffee. Although owing to over-production and insect pests coffee no longer commands the profits it once enjoyed, the Indian output still holds its own against the severe competition of Brazil. The bulk of the output is exported to France.

Resident and Chief Commissioner, Coorg, H. V. Cobb, C.S.I., C.I.E., I.C.S.

AJMER-MERWARA.

Ajmer-Merwara is an isolated British Province in Rajputana. The Agent to the Governor-General in Rajputana administers it as Chief Commissioner. The Province consists of two small separate districts, Ajmer and Merwara, with a total area of 2,711 square miles and a population of 501,395. At the close of the Pindari war Daulat Rao Scindia, by a treaty dated June 25, 1818, ceded the district to the British. Fifty-five per cent. of the population are supported by agriculture, the industrial population being principally employed in the cotton and other industries. The principal crops are maize, millet, barley, cotton, oil-seeds and wheat.

Officiating Agent to the Governor-General in Rajputana and Chief Commissioner of Ajmer, Merwara, A. T. Holme.

Aden was the first new territory added to the Empire after the accession of Queen Victoria. Its acquisition in 1839 was the outcome of an outrage committed by the local Fadhli chief upon the passengers and crew of a British bug-galow wrecked in the neighbourhood. Various acts of treachery supervened during the negotiations regarding the bug-galow outrage and Aden was captured by a force sent by the Bombay Government under Major Baillie. The act has been described as one of those opportune political strokes which have given geographical continuity to British possessions scattered over the world.

Aden is an extinct volcano, five miles long and three broad, jutting out to sea much as Gibraltar does, having a circumference of about 15 miles and connected with the mainland by a narrow isthmus of flat ground. This is nearly covered at one part at high spring tides, but the causeway and aqueduct are always above, though sometimes only just above, water. The highest peak on the wall of precipitous hills that surrounds the old crater which constitutes Aden is 1,775 feet above sea level. Rugged spurs, with valleys between, radiate from the centre to the circumference of the crater. A great gap has been rent by some volcanic disturbance on the sea surface of the circle of hills and this opens to the magnificent harbour. The peninsula of Little Aden, adjacent to Aden proper, was obtained by purchase in 1868 and the adjoining tract of Shaikh Othman, 39 square miles in extent, was subsequently purchased when, in 1882, it was found necessary to make provision for an over-flowing population.

Attached to the settlement of Aden are the islands of Perim, an island of 5 square miles extent in the Straits of Bab-el-Mandeb, in the entrance to the Arabian Sea; Sokotra island, at the entrance to the Gulf of Aden, in the Arabian Sea, acquired by treaty in 1886 and 1,382 miles in extent; and the five small Kuria Muria islands, ceded by the Imam of Maskat in 1854 for the purpose of landing the Red Sea cable, and otherwise valuable only for the guano deposits found upon them. They are off the Arabian coast about two-thirds of the way from Aden to Maskat. The whole extent of the Aden settlement, including Aden, Little Aden, Shaikh Othman and Perim, and subject to post-war adjustments, is approximately 80 miles. The 1911 census showed Aden, with Little Aden, Shaikh Othman, and Perim to have a population of 46,165. The population of Perim is a matter of a few hundreds, largely dependent on the Coal Depot maintained there by a commercial firm. That of Sokotra is 12,000, mostly pastoral and migratory inland, fishing on the coast.

Strategic Importance.

Aden's first importance is as a naval and military station of strategic importance. This aspect was ably discussed by Colonel A. M. Murray, in his "Imperial Outposts." He points out that Aden is not a naval base in the same sense that Gibraltar, Malta and Hong Kong were made, but a *point d'appui*, a rendezvous and striking point for the fleet. It was seized in 1839 because of its usefulness as a harbour of refuge for British ships and from a strategist's point of view this is its primary purpose and the *raison d'être* of its forts and garrison. Aden under British rule has retained its ancient prestige as a fortress of impregnable strength,

invulnerable by sea and by land, dominating the entrance to the Red Sea, and valuable to its owners as a commercial emporium, a port of call and a cable centre. The harbour extends 8 miles from east to west and 4 from north to south and is divided into two bays by a spit of land. The depth of water in the western bay is from 3 to 4 fathoms, across the entrance 4½ to 5 fathoms, with 10 to 12 fathoms 2 miles outside. The bottom is sand and mud. There are several islands in the inner bay. Strategic control of the Red Sea was rendered complete by the annexation of Perim and Sokotra, which may both be regarded as outposts of Aden, and are under the political jurisdiction of the Resident.

The Arab chiefs of the hinterland of Arabia are nearly all stipendiaries of the British Government. Colonel Wahab and Mr. G. H. Fitzmaurice, of the Constantinople Embassy, were appointed in 1902 as Commissioners to delimitate the frontier between Turkish Arabia and the British protectorate around Aden. A convention was signed in 1905 settling details, the frontier line being drawn from Shaikh Murad, a point on the Red Sea coast opposite Perim, to the bank of the river Bana, the eastern limit of Turkish claims, at a point some 29 miles north-east of Dthala, and thence north-east to the great desert. The area left within the British Protectorate was about 9,000 square miles. The arrangement gave to Turkey Cape Bab-el Mandeb, which forms the Arabian bank of the eastern channel past Perim into the Red Sea. England took this gatepost of the Red Sea from the Turks in November 1914. A sanitorium and small British garrison used to be maintained at Dthala, which is 7,700 feet high, but the garrison was withdrawn in 1906, Lord Morley explaining this step as being in accordance with the policy stated in the House of Lords in 1903,—that His Majesty's Government had never desired to interfere with the internal and domestic affairs of the tribes on the British side of the boundary, but had throughout made it plain that they would not assent to the interference of any other Power with those affairs. Affairs in this respect have been disarranged considerably by the war.

British Policy.

There has been much criticism of a policy under which Aden has failed to advance with the same progressive strides which have marked the development of other British dependencies. It is said that the former Persian possessors of Aden built its wonderful water tanks, and the Arabs made an aqueduct 20 miles long, while the British have done nothing except mount guns to protect their coal yards. Trade, it is argued, flourishes because this is a natural emporium of commerce, but not because of the attention its needs get from Government. Lord Roberts, writing on this point a few years ago said: "It is not creditable to British rule to make use of a dependency like Aden for selfish purposes of political necessity without attempting to extend the benefits of civilised Government to the neighbouring native tribes, especially when those tribes are living under the aegis of the British Crown. The Persians, the Turks and even the Arabs did more for Aden in their time than we have done during our seventy years' occupation.....Aden has always suffered under the disadvantage of being an

appanage of the Bombay Presidency, with which it has neither geographical, racial nor political affinity. Probably the best solution of the matter would be to hand over the place to the Colonial Office, relieving the Government of Bombay of a charge which is only looked upon as an incubus." Some important steps have been taken in the past few years to satisfy the commercial needs of the port.

Trade.

The trade of Aden has developed immensely since British acquisition in 1839, largely through the Government of India declaring it a free port in 1850, since when it has attracted much of the valuable trade between Arabia and Africa, formerly monopolised by the Red Sea ports of Hodeida and Mokha. The opening of the Suez Canal was also responsible for a large increase of trade through Aden into the interior.

The total imports by sea in the last pre-war year amounted to £3,756,964, exclusive of treasure, and exports to £3,267,283 imports overland were £270,213 and exports £140,159, exclusive of treasure. The war practically overturned the overseas trade and some time must elapse before it can return to normal conditions. There has been a great increase of trade since the signing of the Armistice, but prices have so greatly risen that comparisons are difficult. Foreign trade in the official year 1918-19 amounted to £6,888,484 and Indian trade to £3,034,642, these amounts representing increases of £1,652,435 and £575,700 respectively. Land trade amounted to £121,533, a decrease of £8,547. Since the cessation of the hostilities on the Shaikh Othman front, the inland trade has increased by one thousand camel loads monthly. In March last the Aden Railway, running between Maa'la and Lahej, also began transporting goods.

Language.

The language of the settlement is Arabic, but several other Asiatic tongues are spoken. The population is chiefly returned as Arabs and Shaikhs. The Somalis from the African coast and Arabs do the hard labour of the port. So far as the settlement is concerned there are no products whatever, with the important exception of salt. The crops of the tribal low country adjoining are jowar, sesamum, a little cotton, madder, a bastard saffron and a little indigo. In the hills, wheat, madder, fruit, coffee and a considerable quantity of wax and honey are obtained. The water supply forms the most important problem. Water is drawn from four sources—wells, aqueducts, tanks or reservoirs and condensers.

Administration.

The Aden settlement was until 1918 subject politically to the Government of Bombay, but it has now been handed over to the Foreign Office. Its administration is conducted by a Resident, who is assisted by four Assistants. The Resident is also ordinarily military Commandant and has hitherto usually been an officer selected from the Indian army, as have his assistants. The Resident has jurisdiction as a Judge of the Vice-Admiralty Court in matters connected with slave trading, his court being called the Colonial Court of the Admiralty. The laws in force in the settlement are generally speaking those in force in the Bombay Presidency, supplemented on certain points by special regulations to suit local conditions. The management of the port is under the control of a Board of Trustees formed in 1888. The principal business of the Port Trust has been the deepening of the harbour, so as to allow vessels of all sizes to enter and leave at all states of the tide. The Aden police force numbers slightly over 200 men. There are hospitals and dispensaries in both Aden and Perim, in addition to the military institutions of this character. The garrison comprises a troop of engineers, three companies of garrison artillery, one battalion of British infantry, two companies of sappers and miners and one Indian regiment. Detachments from the last named are maintained at Perim and Shaikh Othman respectively.

The average temperature of the station is 87 degrees in the shade, the mean range being from 75 in January to 98 in June, with variations up to 102. The lulls between the monsoons, in May and September are very oppressive. Consequently, long residence impairs the faculties and undermines the constitution of Europeans and even Indians suffer from the effects of too long an abode in the settlement, and troops are not posted in the station for long periods, being usually sent there one year and relieved the next. But Aden is exceptionally free from infectious diseases and epidemics, and the absence of vegetation, the dryness of the soil and the purity of the drinking water constitute efficient safeguards against many maladies common to tropical countries. The annual rainfall varies from $\frac{1}{4}$ inch to $8\frac{1}{2}$ inches, with an irregular average of 3 inches.

The following are the principal officers of the present administration:—

Political Resident, Major-General James Marshall Stewart, C.B.

Assistant Residents, Major E. R. L. Browning (Perim), Major C. C. J. Barrett, Capt. A. W. T. Webb, Major B. R. Reilly and Captain H. M. Wightwick.

The area enclosed within the boundaries of India is 1,773,168 square miles, with a population of 315,132,537 of people—nearly one-fifth of the human race. But of this total a very large part is not under British Administration. The area covered in the Native States is 675,267 square miles with a population of seventy millions. The Native States embrace the widest variety of country and jurisdiction. They vary in size from petty states like Lawa, in Rajputana, with an area of 19 square miles, and the Simla Hill States, which are little more than small holdings, to States like Hyderabad, as large as Italy, with a population of thirteen millions. They include the inhospitable regions of Western Rajputana, Baroda, part of the Garden of India, Mysore, rich in agricultural wealth, and Kashmir, one of the most favoured spots on the face of the globe. In the case of 175 States control is exercised by the Government of India, and of about 500 by the Provincial Governments. The four principal states, Hyderabad, Mysore, Baroda and Kashmir, are in direct relation with the Government of India. The other States are grouped under the direction of an Agent to the Governor-General, as for Rajputana and Central India; in one case the Provincial Government has been compelled to group its States, those of Kathiawar, under an Agent to the Governor.

Relations with the Paramount Power.

So diverse are the conditions under which the Native States were established and came into political relation with the Government of India, that it is impossible even to summarise them. But broadly it may be said that as the British boundaries expanded, the states came under the influence of the Government and the rulers were confirmed in their possessions. To this general policy however there was, for a brief period, an important departure. During the regime of Lord Dalhousie the Government introduced what was called annexation through lapse. That is to say, when there was no direct heir, the Government considered whether public interests would be secured by granting the right of adoption. Through the application of this policy, the states of Satara and of Nagpur fell in to the East India Company, and the kingdom of Oudh was annexed because of the gross misgovernment of its rulers. Then came the Mutiny. It was followed by the transference of the dominions of the East India Company to the Crown, and an irrevocable declaration of policy toward the Native States. In the historic Proclamation of Queen Victoria it was set out that "We desire no extension of our present territorial possessions; and while we will permit no aggression on our dominions or our rights to be attempted with impunity, we shall allow no encroachments on those of others. We shall respect the rights, dignity and honour of the Native Princes as our own; and we desire that they, as well as our own subjects, should enjoy that prosperity and that social advancement which can only be secured by internal peace and good government." Since the issue of that proclamation there has been no encroachment on the area under Native rule by the Government of India. On the contrary the movement has been in the op-

posite direction. In 1881 the State of Mysore, which had been so long under British administration that the traditions of Native rule were almost forgotten, was restored to the old Hindu ruling house. In 1911 the Maharajah of Benares, the great taluqqar of Oudh, was granted ruling powers over his extensive possessions. On many occasions the Government of India has had to intervene, to prevent gross misgovernment, or to carry on the administration during a long minority; but always with the undeviating intention of restoring the territories as soon as the necessity for intervention passed. Almost all states possess the right of adoption in default of heirs.

Rights of Native States.

The rights and obligations of the Native States are thus described by the Imperial Gazetteer. The Chiefs have, without exception, gained protection against dangers from without and a guarantee that the protector will respect their rights as rulers. The Paramount Power acts for them in relation to foreign Powers and other Native States. The inhabitants of the Native States are the subjects of their rulers, and except in case of personal jurisdiction over British subjects, these rulers and their subjects are free from the control of the laws of British India. Criminals escaping to a Native State must be handed over to it by its authorities; they cannot be arrested by the police of British India without the permission of the ruler of the State. The Native Princes have therefore a suzerain power which acts for them in all external affairs, and at the same time scrupulously respects their internal authority. The suzerain also intervenes when the internal peace of their territories is seriously threatened. Finally they participate in all the benefits which the protecting power obtains by its diplomatic action, or by its administration of its own dominions, and thus secure a share in the commerce, the railways, the ports, and the markets of British India. Except in rare cases, applied to maritime states, they have freedom of trade with British India although they levy their own customs, and their subjects are admitted to most of the public offices of the British Government.

Obligations of Native States.

On the other hand the Native States are under an obligation not to enter into relations with foreign nations or other states; the authority of their rulers has no existence outside their territories. Their subjects outside their dominions become for all intents and purposes British subjects. Where foreign interests are concerned, the Paramount Power must act so that no just cause of offence is given by its subordinate allies. All Native States alike are under an obligation to refer to the British every question of dispute with other states. Inasmuch as the Native States have no use for a military establishment other than for police, or display, or for co-operation with the Imperial Government, their military forces, their equipment and armament are prescribed by the Paramount Power. Although old and unaltered treaties declare that the British Government will have no manner of concern with any of a Maharajah's dependents or servants, with respect to whom the Maharajah is absolute, logic and public opinion

have endorsed the principle which Lord Canning set forth in his minute of 1860, that the "Government of India is not precluded from stepping in to set right such serious abuses in a Native Government as may threaten any part of the country with anarchy or disturbance, nor from assuming temporary charge of a Native State when there shall be sufficient reason to do so." Of this necessity the Governor-General in Council is the sole judge, subject to the control of Parliament. Where the law of British India confers jurisdiction over British subjects or other specified persons in foreign territory, that power is exercised by the British courts which possess it. The subjects of European Powers and the United States are on the same footing. Where cantonments exist in Native territory, jurisdiction both over the cantonment and the civil station is exercised by the suzerain power.

Political Officers.

The powers of the British Government are exercised through Political Officers who as a rule reside in the states themselves. In the larger states the Government is represented by a Resident, in groups of states by an Agent to the Governor-General, assisted by local Residents or Political Agents. These officers form the sole channel of communication between the Native States and the Government of India and its Foreign Department, with the officials of British India and with other Native States. They are expected to advise and assist the Ruling Chiefs in any administrative or other matters on which they may be consulted. Political Agents are similarly employed in the larger States under the Provincial Governments, but in the petty states scattered over British India the duties of the Agent are usually entrusted to the Collector or Commissioner in whose district they lie. All questions relating to the Native States are under the special supervision of the Supreme Government, and in the personal charge of the Governor-General. A proposal has been made by the Government of India that, in view of the increasing importance of the Native States, an additional Secretary, styled the Political Secretary, shall be appointed, who shall be in special charge, under the Viceroy, of these questions.

Closer Partnership.

Events have tended gradually to draw the Paramount Power and the Native States into closer harmony. Special care has been devoted to the education of the sons of Ruling Chiefs, first by the employment of tutors, and afterwards by the establishment of special colleges for the purpose. These are now established at Ajmere, Rajkot, Indore and Lahore. The Imperial Cadet Corps whose headquarters are at Dehra Dun, imparts military training to the scions of the ruling chiefs and

noble families. The spread of higher education has placed at the disposal of the Native States the products of the Universities. In these ways there has been a steady rise in the character of the administration of the Native States, approximating more closely to the British ideal. Most of the Native States have also come forward to bear their share in the burden of Imperial defence. Following on the spontaneous offer of military assistance when war with Russia appeared to be inevitable over the Penjdeh incident in 1885, the states have raised a portion of their forces up to the standard of the Native troops in the Indian Army. These are termed Imperial Service Troops; they belong to the states, they are officered by Indians; but they are inspected by a regular cadre of British officers, under the general direction of the Inspector-General of Imperial Service Troops. Their numbers are approximately 22,000 men; their armament is the same as that of the Indian Army and they have done good service often under their own Chiefs, on the Frontier and in China and in Somaliland. Secure in the knowledge that the Paramount Power will respect their rights and privileges, the Ruling Chiefs have lost the suspicion which was common when their position was less assured, and the visits of the Prince of Wales in 1875, of the Prince and Princess of Wales in 1905-06, and of the King and Queen in 1911-12 have tended to seal the devotion of the great feudatories to the Crown. The improvement in the standard of native rule has also permitted the Government of India largely to reduce the degree of interference in the internal affairs of the Native States. The new policy was authoritatively laid down by Lord Minto, the then Viceroy, in a speech at Udaipur in 1909, when he said:—

"Our policy is with rare exceptions, one of non-interference in the internal affairs of the Native States. But in guaranteeing their internal independence and in undertaking their protection against external aggression it naturally follows that the Imperial Government has assumed a certain degree of responsibility for the general soundness of their administration and could not consent to incur the reproach of being an indirect instrument of misrule. There are also certain matters in which it is necessary for the Government of India to safeguard the interests of the community as a whole as well as those of the paramount power, such as railways, telegraphs and other services of an Imperial character. But the relationship of the Supreme Government to the State is one of suzerainty. The foundation-stone of the whole system is the recognition of identity of interests between the Imperial Government and Durbars and the minimum of interference with the latter in their own affairs."

HYDERABAD.

Hyderabad, the premier Native State in India, is in the Deccan. Its area is 82,698 square miles and population 13,374,676. The general physical characteristics of the State are an elevated plateau, divided geographically and ethnologically by the Manjra and Godavari rivers. To the North-West is the Trappean region, peopled

by Marathas, a country of black cotton soil, producing wheat and cotton. To the South-East is the granitic region of the Telugus and producing rice.

HISTORY.—In pre-historic times Hyderabad came within the great Dravidian zone. The date of the Aryan conquest is obscure, but the

dominions of Asoka 272 to 231 B.C. embraced the northern and western portions of the State. Three great Hindu dynasties followed, those of the Pallavas, Chalukyas and Yadavas. In 1294 the irruption of the Mahomedans under Ala-ud-din Khilji, commenced, and thenceforward till the time of Aurungzebe the history of the State is a confused story of struggles against the surviving Hindu kingdom of the South, and after the fall of Vijayanagar, with each other. Aurungzebe stamped out the remains of Mahomedan independence of the South, and set up his General, Asaf Jah, of Turcoman descent, as Viceroy, or Subhadar of the Deccan in 1713. In the chaos which followed the death of Aurungzebe, Asaf Jah had no difficulty in establishing and maintaining his independence, and thus founded the present House. During the struggle between the British and the French for mastery in India, the Nizam finally threw in his lot with the British, and unshaken even by the excitement of the mutiny, has been so staunch to his engagements as to earn the title of "Our Faithful Ally." The present ruler is His Exalted Highness Sir Usman Ali Khan Bahadur Fateh Jung, G.C.S.I.

THE BERARS.—A most important event in the history of the State occurred in November 1902, when the Assigned Districts of Berar were leased in perpetuity to the British Government. These districts had been administered by the British Government on behalf of the Nizam since 1853; under the treaties of 1853 and 1860, they were "assigned" without limit of time to the British Government to provide for the maintenance of the Hyderabad contingent, a body of troops kept by the British Government for the Nizam's use, the surplus revenues, if any, being payable to the Nizam. In course of time it had become apparent that the maintenance of the Hyderabad contingent on its old footing as a separate force was inexpedient and unnecessary, and that similarly the administration of Berar as a separate unit was very costly, while from the point of view of the Nizam, the precarious and fluctuating nature of the surplus was financially inconvenient. The agreement of 1902 re-affirmed His Highness' sovereignty over Berar, which instead of being indefinitely "assigned" to the Government of India, was leased in perpetuity to an annual rental of 25 lakhs (nearly £167,000); the rental is for the present charged with an annual debit towards the repayment of loans made by the Government of India. The Government of India were at the same time authorised to administer Berar in such manner as they might think desirable, and to redistribute, reduce, re-organise and control the Hyderabad Contingent, due provision being made, as stipulated in the treaty of 1853, for the protection of His Highness' dominions. In accordance with this agreement the Contingent ceased in March 1903 to be a separate force and was re-organised and redistributed as an integral part of the Indian Army, and in October 1903 Berar was transferred to the administration of the Chief Commissioner of the Central Provinces.

ADMINISTRATION.—The Nizam is supreme in the State and exercises the power of life and death over his subjects. The form of government was changed in 1919, an Executive Council being

established which consists of seven ordinary and one extraordinary members under a president Sir Syed Ali Imam, K.C.S.I. Below the Secretariat the State is divided into Subhas or Divisions, Districts and Talukas. Fifteen District, 88 Taluk and nine Divisional Boards are at work in the District. A Legislative Council, consisting of 23 members, of whom 12 are official and 11 non-official, is responsible for making laws. The State maintains its own currency, the Osmania Sicca rupee with a subordinate coinage. In 1904 an improved Mahbubia rupee was struck and this exchanges with the British rupee at the ratio of 115 or 116 to 100. It has its own postal system and stamps for internal purposes. It maintains its own Army, comprising 15,357 troops, of which 3,726 are classed as Regular and 11,631 as Irregular. There are in addition 1,264 Imperial Service Troops.

FINANCE.—After many vicissitudes, the financial position of the State is strong. For the year 1916-17 receipts amounted to Rs. 603 lakhs and expenditure to Rs. 568 lakhs. Under the latter heading must be noted His Exalted Highness' donation of £100,000 to the Admiralty for the anti-submarine campaign in addition to Rs. 3 lakhs per mensem as a war contribution.

PRODUCTION AND INDUSTRY.—The principal industry of the State is agriculture, which maintains 57·1 per cent. of the population. The common system of land tenure is ryotwari. As no reliable figures are available to show the gross produce it is impossible to say what proportion the land revenue bears to it, but it is collected without difficulty. The principal food crops are millet and rice; the staple money crops cotton, which is grown extensively on the black cotton soils, and oil-seeds. The State is rich in minerals. The great Warangal coal measures are worked at Singareni, but the efforts to revive the historic gold and diamond mines have met with very qualified success. The manufacturing industries are consequent on the growth of cotton, and comprise three spinning and weaving mills and ginning and pressing factories in the cotton tracts.

COMMUNICATIONS.—One hundred and thirty-seven miles of the broad gauge line from Bombay to Madras traverse the State. At Wadi, on this section, the broad gauge system of the Nizam's Guaranteed State Railway takes off, running East to Warangal and South-East toward Bezwada, a total length of 330 miles. From Hyderabad the metre gauge Godavari Railway runs North-West to Manmad on the Great Indian Peninsula Company's system 391 miles. There are thus 471 miles of broad gauge and 391 of metre in the State. The Barsi Light Railway owns a short extension to Latur. The roads are generally inferior.

EDUCATION.—The State maintains two Colleges. The Nizam College at Hyderabad (first grade) is affiliated to the Madras University. The Oriental College at Hyderabad prepares students for the local Moulvi and Munshi examinations. In 1916-17 the total number of educational institutions rose from 1,254 to 2,579, the number of primary schools in particular having been largely increased.

British Resident.—Mr. C. L. S. Russell, I.C.S.,

MYSCORE.

The State of Mysore is surrounded on all sides by the Madras Presidency except on the north and north-west where it is bounded by the districts of Dharwar and North Canara respectively and towards the south-west by Coorg. It is naturally divided into two regions of distinct character; the hill country (the Malnad) on the west and the wide-spreading valleys and plains (the Maidan) on the east. The State has an area of 29,461 square miles excluding that of the Civil and Military Station of Bangalore and a population of 5,705,359, of whom over 92 per cent. are Hindus. Kanarese is the distinctive language of the State.

HISTORY.—The ancient history of the country is varied and interesting. Tradition connects the table-land of Mysore with many a legend enshrined in the great Indian epics, the Ramayana and the Mahabharata. Coming down to historical times, the north-eastern portion of the country formed part of Asoka's Empire in the third century B. C. Mysore then came under the rule of the Andhra dynasty. From about the third to the eleventh century A. D. Mysore was ruled by three dynasties, the north-western portion by the Kadambas, the eastern and northern portions by the Pallavas and the central and southern portions by the Gangas. In the eleventh century, Mysore formed part of the Chola dominion, but the Cholas were driven out early in the twelfth century by the Hoyasalas, an indigenous dynasty with its capital at Halebid. The Hoysala power came to an end in the early part of the fourteenth century. Mysore was next connected with the Vijayanagar Empire. At the end of the fourteenth century, Mysore became associated with the present ruling dynasty. At first tributary to the dominant empire of Vijayanagar, the dynasty attained its independence after the downfall of Vijayanagar in 1565. In the latter part of the eighteenth century the real sovereignty passed into the hands of Haidar Ali and then his son Tippu Sultan. In 1799, on the fall of Seringapatam, the British Government restored the State comprised within its present limits, to the ancient dynasty in the person of Maharaja Sri Krishnaraja Wadiyar Bahadur III. Owing to the insurrections that broke out in some parts of the country, the management was assumed by the British Government in 1831. In 1881, the State was restored to the dynasty in the person of Sri Chamarajendra Wadiyar Bahadur under conditions and stipulations laid down in the Instruments of Transfer. That ruler, with the assistance of Mr. (afterwards Sir) K. Seshadri Iyer, K.C.S.I., as Dewan, brought Mysore to a state of great prosperity. He died in 1894 and was succeeded by the present Maharaja Sir Sri Krishnaraja Wadiyar Bahadur, G.C.S.I., who was installed in 1902. In November 1913, the Instrument of Transfer was replaced by a Treaty which indicates more appropriately the relation subsisting between the British Government and the State of Mysore.

ADMINISTRATION.—The city of Mysore is the capital of the State, but Bangalore City is the administrative head quarters. His Highness the Maharaja is the ultimate authority

in the State and the administration is conducted under his control, by the Dewan and four Members of the Council including the Extraordinary Member. The Chief Court consisting of three Judges is the highest judicial tribunal in the State. A Representative Assembly meets twice a year at Mysore—once in October during the Dasara and a second time during the latter part of April. In the October Session the Dewan presents to the Assembly an account of the Finances of the State of the preceding Official year and deals also with the more important administrative measures. Representations about wants and grievances are heard and discussed. In the April Session the Budget for the ensuing year is placed before the Assembly and its opinion invited. Such of the representations of the October Session as were not heard for want of time are taken up and discussed along with the fresh subjects brought up. There is also a Legislative Council consisting of 25 members, of whom 12 are officials, and 13 non-officials, eight elected and five nominated. The Council has been given the privileges of interpellation, discussion of the State budget and the moving of resolutions on matters other than the budget. All the important branches of the administration are controlled by separate heads of departments. For administrative purposes, the State is divided into 8 districts and subdivided into 68 talukas, each district being under a Deputy Commissioner and District Magistrate and each taluk under an Amildar and Subordinate Magistrate. The State maintains a military force of 3,883 including 925 in the Imperial Service Lancers and 748 in the Imperial Service Transport Corps, which are on active service.

The cash balance at the beginning of 1917-18 was 66 lakhs. Total receipts during the year 1917-18 were Rs. 315 lakhs and total disbursement 313. The principal revenue heads are:—Land Revenue Rs. 107 lakhs; Mining Royalty Rs. 16 lakhs; Forest revenue Rs. 44 lakhs; Excise Rs. 62 lakhs; Stamps Rs. 12 lakhs; Railways Rs. 14 lakhs and Electric Power Rs. 14 lakhs. Mysore pays an annual subsidy of Rs. 35 lakhs to the British Government besides contributing indirectly to the British Revenues under Customs and Salt.

ECONOMIC CONFERENCE.—The Mysore Economic Conference was organised in June 1911 with the object of creating and keeping alive public interest in matters connected with the economic progress of the State by a frequent interchange of views and discussions among those competent to deal with them and in order to associate men of enlightenment, public spirited citizens, prominent agriculturists, merchants and others with the officers of Government in such deliberations. The Conference meets annually at Mysore during the festivities in connection with His Highness the Maharaja's birthday. The Dewan is the President of the Conference. It has three Central Committees dealing with questions connected with Agriculture, Education and Industries and Commerce, and Committees for developing economic activities in local areas, such as districts, talukas and towns. Under the auspices of the Conference a monthly Journal

is issued in English and a weekly paper in Kannada, and bulletins on important subjects are periodically issued.

Agencies for carrying on the work of the Economic Conference in the interior of the State.

(1) There is a full time officer attached to each District, called the District Economic Superintendent, whose main duty is to study and investigate local conditions and organise economic activities in the District.

(2) A number of non-official gentlemen have been appointed Honorary Supervisors in Taluks to assist Taluk Progress Committees and other agencies connected with the Economic Conference in stimulating the activities of the people in the advancement of education, agriculture, industries and trade.

AGRICULTURE.—Nearly three-fourths of the population are employed in agriculture and the general system of land tenure is Ryotwari. The principal food crops are ragi, rice, jola, millets, gram and sugarcane and the chief fibres are cotton and san-hemp. Over 28,000 acres are under mulberry, the silk industry being the most profitable in Mysore next to gold mining. A Superintendent of Sericulture has recently been appointed, arrangements are being made for the supply of disease free seed and a central and 6 Taluka Popular Schools have been started. The Department of Agriculture which was recently reorganised on a large scale is popularising agriculture on scientific lines by means of demonstrations, investigations and experiments. There is one Central Farm at Hebbal to deal with all classes of crops and two others, one at Hiriyur in connection with cotton and crops suited to localities where the rainfall is light and the other at Marathur in the region of heavy rainfall. A Sugarcane Farm has been opened under the new Krishnarajasagara works and Committees have been constituted in several districts for the development of the Sugarcane cultivation.

INDUSTRIES AND COMMERCE.—A Department of Industries and Commerce was organised in 1913 with a view to the development of Industries and Commerce in the State. Its main functions are stimulating private enterprise by the offer of technical advice and other assistance for starting new industries, undertaking experimental work for pioneering industries and developing existing industries and serving as a general bureau of information in industrial and commercial matters. A system of granting loans for the purchase of machinery and appliances has been introduced in the State. The manufacturing industries include two cotton mills, one woollen mill, nine cotton ginning mills, three cotton presses, and three silk filatures. There are also one oil mill, seventeen rice mills, nine sugar mills, sixteen brick and tile factories, one cigar factory, two tanneries, fifteen mechanical workshops, two distilleries, one silk reeling house, two flour mills, seven bone-crushing mills and coffee works, two dyeing factories, one hosiery, one brewery, one iron and brass foundry, one lacquer work factory, two taxidermic works, one saw-mill, one weaving factory, one Pharmaceutical work, one wood turning and one art Litho-

graphic press. In addition there are fifty-four pumping plants for irrigation. The Sandalwood Oil Factory started on an experimental basis is now working on a commercial scale. The factory at Mysore has also commenced operations on a large scale. Government have sanctioned a scheme for the manufacture of paper pulp from bamboos. Preliminary investigations have been completed for establishing wood distillation and iron works in the State and an agreement has been entered into with Messrs. Tata & Sons for working the Scheme. Local Syndicates have been formed at Davangere and Mysore for establishing cotton mills at those places. A button factory has just been started as well as a soap factory and a metal working factory. Concessions have been granted to a private gentleman in Mysore for the manufacture of matches as a home industry. An Arts and Crafts Depot has been opened to give special encouragement for inlay workers, sandalwood carvers and to those engaged in preparing high class silk, lace clothes and metal works. Home Industries Institutes have been established at Bangalore and Mysore. The establishment of a Central District and Commercial Museums at District Headquarters has been sanctioned. A Chamber of Commerce has been established at Bangalore with branches at important trade centres. The Department has been reconstituted so as to provide for a separate division for dealing solely with questions relating to commercial developments in the State.

BANKING.—In 1913, a State-aided bank called the Bank of Mysore was started with its headquarters in Bangalore and agencies at many of the important places in the State. Besides this there are two Provincial Banks, 2 District Banks, 15 Federal Banking Unions and 1,097 Co-operative Societies working with a total working Capital of Rs. 65.04 Lakhs.

COMMUNICATIONS.—The Railway system radiates from Bangalore, various branches of the Madras and Southern Mahratta Railway running through the State. The length of the lines owned by the State and worked under contract by the Company is 411.23 miles, of which 9.88 are of broad gauge and the rest metre gauge. The Kolar District Board Railway (63 miles) and the Bangalore-Chickballapur Light Railway (35 miles) both of 2-6" gauge together with a tramway from Tarikere to Narasimharajapura (27 miles) 2 feet gauge have been opened and are being worked by State Agency.

Two lines, Chickjapur to Chitaldrug, 21 miles, metre-gauge, and Tadasa-Hebbe, 10 miles, 2 feet gauge, are under construction. Several other projects were under survey and investigation during the year and some of them are about to be taken up for construction in the near future.

EDUCATION.—A separate University for Mysore was established on the 1st July 1916. It is of the teaching and residential type composed of the Central College at Bangalore, and the Maharaja's College at Mysore, with headquarters at Mysore. An important feature is that the University course is one of three years, what corresponds to the first year in

other Universities being in the Collegiate High School which specially trains the students for one year to fit them for the University course. The two colleges are efficiently equipped and organised and there is a training college for men located at Mysore. There is also a college for women at Mysore, i.e., the Maharani's College.

With the introduction of compulsory education in select towns and the increase in the number of village schools, primary education has during recent years made considerable advance. Schools have been started for imparting instruction in agricultural, commercial, engineering and other technical subjects. Adult education and vocational training have also been taken in hand. There were altogether in 1917-18, 9,633 public and 1,107 private educational institutions in the State. This gives one school to every 2.75 square miles of the area and to every 531 inhabitants.

PLACES OF INTEREST.—Mysore City, the capital, is a modern city laid out with fine roads and suburbs. The prominent buildings

are the Palace, the Chamarajendra Technical Institute, Government House, the Maharaja's College, the Maharani's College and the Oriental Library.

Bangalore, the largest city in the State and the commercial and manufacturing centre, stands on a table land, 3,000 feet above the sea and is noted for its salubrious climate and luxuriant gardens. The principal places of interest are the Public Offices, the Central College buildings, the Museum, the Lal Bagh, the Indian Institute of Science and the Indian Sanskrit Institute.

The historic town of Seringapatam, the famous Jog Falls, the Kolar Gold Fields, the Sivasamudram Falls, and Belur, Somnathpur and Halebid with their temples of exquisite architecture, are some of the other important places of interest in the State.

Resident in Mysore and Chief Commissioner of Coorg.—H. V. Cobb, C.S.I., C.I.E., I.C.S.

Dewan.—Sardar M. Kantaraja Urs, C. S. I.

BARODA.

The State of Baroda is situated partly in Gujarat and partly in Kathiawar. It is divided into four distinct blocks: (1) the southern district of Navsari near the mouth of the Tapi river, and mostly surrounded by British territory; (2) central district, North of the Narbada, in which lies Baroda, the capital city; (3) to the North of Ahmedabad, the district of Kadi; and (4) to the West, in the Peninsula of Kathiawar, the district of Amreli, formed of scattered tracts of land. The area of the State is 8,182 square miles; the population is over two millions, of whom over four-fifths are Hindus.

HISTORY.—The history of the Baroda State as such dates from the break-up of the Mughal Empire. The first Maratha invasion of Gujarat took place in 1705. In later expeditions Pilaji Gaikwar, who may be considered as the founder of the present ruling family, greatly distinguished himself. Songhad was the headquarters till 1766. Since 1723 Pilaji regularly levied tribute in Gujarat. His son Damaji finally captured Baroda in 1734, since when it has always been in the hands of the Gaikwars; but Mughal authority in Gujarat did not end until the fall of Ahmedabad in 1758, after which the country was divided between the Gaikwar and the Peshwa. In spite of the fact that Damaji was one of the Maratha chiefs defeated at Panipat by Ahmed Shah, he continued to add to his territory. He died in 1768, leaving the succession in dispute between two rival sons. He was succeeded in turn by his sons Sayaji Rao I, Fattesing Rao, Manaji Rao and Govind Rao. The last died in 1800, and was succeeded by Anand Rao. A period of political instability ensued which was ended in 1802 by the help

of the Bombay Government, who established the authority of Anand Rao at Baroda. By a treaty of 1805 between the British Government and Baroda, it was arranged *inter alia* that the foreign policy of the State should be conducted by the British, and that all differences with the Peshwa should be similarly arranged. Baroda was a staunch ally of the British during the wars with Baji Rao Peshwa, the Pindari hordes and Holkar. But from 1820 to 1841, when Sayaji Rao II. was Gaikwar, differences arose between the two Governments, which were settled by Sir James Carnac, Governor of Bombay in 1841. Ganpat Rao succeeded Sayaji Rao in 1847. During his rule, the political supervision of Baroda was transferred to the Supreme Government. His successor Khande Rao, who acceded the *Gadi* in 1856, introduced many reforms. He stood by the British in the Mutiny. He was succeeded by his brother Malhar Rao in 1870. Malhar Rao was deposed in 1875 for "notorious misconduct" and "gross misgovernment," but the suggestion that he had instigated the attempt to poison Col. Phayre, the Resident, was not proved. Sayaji Rao III., a boy of 13 years of age, who was descended from a distant branch of the family, was adopted as heir of Khande Rao in 1875 and is the present Gaikwar. He was invested with full powers in 1881.

ADMINISTRATION.—An executive council, consisting of the principal officers of the State, carries on the administration, subject to the control of the Maharaja, who is assisted by a Dewan and other officers. A number of departments have been formed, which are presided over by officials corresponding to those in British India. The State is divided

into four *prants* each of which is subdivided into *Mahals* and *Peta Mahals* of which there are in all 42. Attempts have for some years been made to restore village autonomy, and village panchayats have been formed which form part of a scheme for local self-government. There is a Legislative Department, under a Legal Remembrancer, which is responsible for making laws. There is also a Legislative Council, consisting of nominated and elected members. A High Court at Baroda possesses jurisdiction over the whole of the State and hears all final appeals. From the decisions of the High Court, appeals lie in certain cases, to the Maharaja, who decides them on the advice of the Huzur Nyaya Sabha. The State Army consists of 5,084 Regular forces and 3,806 Irregular forces.

FINANCE.—In 1916-17, the total receipts of the State were Rs. 202 lakhs and the disbursements Rs. 189 lakhs. The principal Revenue heads were:—Land Revenue, Rs. 114 lakhs; Abkari, Rs. 26 lakhs; Opium, Rs. 5 lakhs; Railways, Rs. 11 lakhs; Interest Rs. 10 lakhs; Tribute from other States, Rs. 7 lakhs. British Currency was introduced in 1901.

PRODUCTION AND INDUSTRY.—Agriculture and pasture support 63 per cent. of the people. The principal crops are rice, wheat, gram, castor-oil, rapeseed, poppy, cotton, sun-hemp, tobacco, sugarcane, maize, and garden crops. The greater part of the State is held on *ryotwari* tenure. The State contains few minerals, except sandstone, which is quarried at Songar, and a variety of other stones which are little worked. There are 39 industrial or commercial concerns in the State registered under the State Companies' Act. There are four Agricultural Banks and 359 Co-operative Societies in the Baroda State.

COMMUNICATIONS.—The B. B. & C. I. Railway crosses part of the Navsari and Baroda *prants*,

and the Rajputana-Malwa Railway passes through the Kadi *prant*. A system of branch lines has been built by the Baroda Durbar in all the four *prants*, in addition to which the Tapti Valley Railway and the Baroda-Godhra Chord line (B. B. & C. I.) pass through the State. The Railways constructed by the State are about 500 miles in length and 93 miles are under construction. Good roads are not numerous.

EDUCATION.—The Education Department controls 3,113 institutions of different kinds, in 59 of which English is taught. The Baroda College is affiliated to the Bombay University. There are a number of high schools, technical schools, and schools for special classes, such as the jungle tribes and unclean castes. The State is "in a way pledged to the policy of free and compulsory primary education." It maintains a system of rural and travelling libraries. Ten per cent. of the population is returned in the census as literate. Total expense on Education is about Rs. 23 lakhs.

CAPITAL CITY.—Baroda City with the cantonment has a population of 99,345. It contains a public park, a number of fine public buildings, palaces and offices; and it is crowded with Hindu temples. The cantonment is to the North-west of the city and is garrisoned by an infantry battalion of the Indian Army. An Improvement Trust has been formed to work in Baroda City and has set itself an ambitious programme.

RULER.—His Highness Farzand-i-Khas-i, Dowlat-i-Englishia Maharaja Sir Sayaji Rao Gaekwar Sena Khas Khel, Samsher Bahadur, G.C.S.I., G.C.I.E., Maharaja of Baroda.

Offg. Resident—W. P. Barton, C.I.E.

Dewan—Manubhai N. Mehta, Esq., M.A., LL.B., C. S. I.

BALUCHISTAN AGENCY.

In this Agency are included the Native States of Kalat, Kharan and Las Bela. The Khan of Kalat is head of the Baluchistan tribal chiefs whose territories are comprised under the following divisions:—Jhalawan, Sarawan, Makran, Kachhi and Domki-Kaheri-Umrani. These districts form what may be termed Kalati Baluchistan, and occupy an area of 54,713 square miles. The inhabitants of the country are either Brahuis or Baluchis, both being Mahomedans of the Sunni sect. The country is sparsely populated, the total number being about 336,423. It derives its chief importance from its position with regard to Afghanistan on the north-western frontier of British India. The relations of Kalat with the British Government are governed by two treaties of 1854 and 1876, by the latter of which the Khan agreed to act in subordinate co-operation with the British Government. There are, however, agreements with Kalat in connection with the construction of the Indo-European telegraph, the cession of jurisdiction on the

railways and in the Bolan Pass, and the permanent leases of Quetta, Nushki and Nasirabad. The Khan is assisted in the administration of the State by a Wazir-i-Azam lent by the British Government. The Governor-General's Agent in Baluchistan conducts the relations between the Government of India and the Khan, and exercises his general political supervision over the district. The revenue of the State is about Rs. 12,14,000. The present Khan is, His Highness Beglar Begi Mir Sir Mahmud Khan of Kalat, G.C.I.E. He was born in 1864.

Kharan extends in a westerly and south-westerly direction from near Nushki and Kalat to the Persian border. Its area is 18,565 square miles; it has a population of 22,663 and an annual average revenue of about Rs. 1,00,000.

The present Chief, Sardar Bahadur Habibullah Khan, was born about 1897 and succeeded his father Sardar Yakub Khan in 1911, when the latter was murdered by his uncle Amir Khan. The State is divided into 13 *Niabats*

and the whole sources of income are entirely agricultural.

Las Bela is a small State occupying the valley and delta of the Purali river, about 50 miles west of the Sind boundary. Area 7,132 square miles; population 61,205, chiefly Sunni Mahomedans, estimated revenue about Rs. 3,85,000. The Chief of Las Bela, known as the Jam, is bound by agreement with the British Government to conduct the administration of his State in

accordance with the advice of the Governor-General's Agent. This control is exercised through the Political Agent in Kalat. The Jam also employs an approved Wazir, to whose advice he is subject and who generally assists him in the transaction of State business.

Agent to the Governor-General for Baluchistan:—Hon. Lt.-Col. A. B. Dew, C.S.I., C.I.E.

RAJPUTANA AGENCY.

Rajputana is the name of a great territorial circle with a total area of about 130,462 square miles, which includes 18 Native States, two chiefships, and the small British province of Ajmer-Merwara. It is bounded on the west by Sind, on the north-west by the Punjab State of Bahawalpur, on the north and north-east by the Punjab, on the east by the United Provinces and Gwalior, while the southern boundary runs across the central region of India in an irregular zigzag line. Of the Native States 17 are Rajput, 2 (Bharatpur and Dholpur) are Jat, and one (Tonk) is Mahomedan. The chief administrative control of the British district is vested *ex-officio* in the political officer, who holds the post of Governor-General's Agent for the supervision of the relations between the several Native States of Rajputana and the Government of India. For administrative purposes they are divided into the following groups:—Alwar Agency; Bikanir Agency, Eastern Rajputana Agency, 3 States (Bharatpur, Dholpur Karauli); Haraoti and Tonk Agency, 3 States (principal States Bundi and Tonk); Jaipur Residency, 3 States (principal State, Jaipur); Kotah and Jhalawar Agency, 2 States; Mewar Residency; Southern Rajputana States Agency, 4 States (principal State, Banswara); Western Rajputana States Agency; 3 States (principal States, Marwar and Sirohi).

The Aravalli Hills intersect the country almost from end to end. The tract to the north-west of the hills is, as a whole, sandy, ill-watered and unproductive, but improves gradually from being a mere desert in the far west to comparatively fertile lands to the north-east. To the south-east on the Aravali Hills lie higher and more fertile regions which contain extensive hill ranges and which are traversed by considerable rivers.

COMMUNICATIONS.—The total length of railways in Rajputana is 1,576 miles, of which 739 are the property of the British Government. The Rajputana-Malwa (Government) runs from Ahmedabad to Bandikui and from there branches to Agra and Delhi. Of the Native State railways the most important is the Jodhpur-Bikaner line from Marwar Junction to Hyderabad (Sind) and to Bikaner.

INHABITANTS.—Over 50 per cent. of the population are engaged in some form of agriculture; about 20 per cent. of the total population are maintained by the preparation and supply of material substances; personal and domestic service provides employment for about 5 per cent. and commerce for 2½ per cent. of the population. The principal language is Rajasthani. Among castes and tribes, the most numerous

are the Brahmans, Jats, Mahajans, Chamars, Rajputs, Minas, Gujars, Bhils, Malis, and Balais. The Rajputs are, of course, the aristocracy of the country, and as such hold the land to a very large extent, either as receivers of rent or as cultivators. By reason of their position as integral families of pure descent, as a landed nobility, and as the kinsmen of ruling chiefs, they are also the aristocracy of India; and their social prestige may be measured by observing that there is hardly a tribe or clan (as distinguished from a caste) in India which does not claim descent from, or irregular connection with, one of these Rajput stocks.

The population and area of the States are as follows:—

Name of State.	Area in square miles.	Population in 1911.
<i>Mewar Residency—</i>		
Udaipur	12,953	1,293,776
Banswara	1,946	165,463
Dungarpur	1,447	159,192
Partabgarh	886	62,704
<i>Western States Residency—</i>		
Jodhpur	34,963	2,057,553
Jaisalmer	16,062	88,311
Sirohi	1,964	189,127
<i>Jaipur Residency—</i>		
Jaipur	15,579	2,636,674
Kishangarh	858	87,191
Lawa	19	2,564
<i>Haraoti-Tonk Agency—</i>		
Bundi	2,220	218,730
Tonk	1,114	303,181
Shahpura	405	47,397
<i>Eastern States Agency—</i>		
Bharatpur	1,982	626,665
Dholpur	1,155	270,973
Karauli	1,242	156,786
<i>Kotah-Jhalawar Agency—</i>		
Kotah	5,684	639,089
Jhalawar	810	96,271
Bikaner	23,311	700,983
Alwar	3,141	791,688

Udaipur State (also called Meywar) was founded about 646 A.D. The capital city is Udaipur, which is beautifully situated on the slope of a low ridge, the summit of which is crowned by the Maharajah's palaces, and to the north and west, houses extend to the banks of a beautiful piece of water known as the Pichola Lake in the middle of which stand two island palaces. It is situated near the terminus of the Udaipur-Chitor Railway, 697 miles north of Bombay. The present ruler is His Highness Maharajadhiraj Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., who was born in 1849 and succeeded in 1884. He is the head of the Seesodia Rajputs and is the Premier Chief. The administration is carried on by the Maharana, assisted by two ministerial officers who form the chief executive department in the State. The revenue and expenditure of the State are now about 35 and 32 lakhs a year respectively. Udaipur is rich in minerals which are little worked. Its archæological remains are numerous, and stone inscriptions dating from the third century have been found.

Banswara State, the southernmost in Rajputana, became a separate State about 1527. Towards the end of the eighteenth century Banswara became more or less subject to the Marathas, and paid tribute to the Raja of Dhar. In 1812 the Maharawal offered to become tributary to the British Government on condition of the expulsion of the Marathas, but no definite relations were formed with him till the end of 1818. The present ruler is His Highness Ray Rayan Maharawal Sri Prithi Singh Bahadur, who was born in 1888 and succeeded his father in 1913. The normal revenue is about 8 lakhs and the expenditure is nearly equal to the income. The area of the State is 1,946 square miles, and the population 187,468. His Highness is entitled to a salute of 15 guns.

Dongarpur State, with Banswara, formerly comprised the country called the Pagar. It was invaded by the Mahrattas in 1818. As in other States, inhabited by hill tribes, it became necessary at an early period of British supremacy to employ a military force to coerce the Bhills. The State represents the *Gadhi* of the eldest branch of the Sisodiyas and dates its separate existence from about the close of the 12th Century, when Mahup, the rightful heir to the Chittor Throne, migrated to these parts. The present Chief is His Highness Rai Rayan Maharawal Shri Lakshman Singhji born on 7th March 1908 and succeeded on 15th November 1918. His Highness being minor, the administration is carried on by the Executive Council of the State under the supervision of the Political Agent, Southern Rajputana States. No railway line crosses the territory, the nearest railway station, Udaipur, being 65 miles distant. Revenue a little above 5 lakhs.

Partabgarh State, also called the Kanthal, was founded in the sixteenth century by a descendant of Rana Mokal of Mewar. The town of Partabgarh was founded in 1698 by Partab Singh. In the time of Jaswant Singh (1775-1844), the country was overrun by the Marathas, and the Maharawal only saved his State by agreeing to pay Holkar a tribute of *Salim Shahi* Rs. 72,700, (which then being

coined in the State Mint was legal tender throughout the surrounding Native States) in lieu of Rs. 15,000 formerly paid to Delhi. The first connexion of the State with the British Government was formed in 1804; but the treaty then entered into was subsequently cancelled by Lord Cornwallis, and a fresh treaty, by which the State was taken under protection, was made in 1818. The tribute to Holkar is paid through the British Government, and in 1904 was converted to Rs. 36,350 British currency. The present ruler is His Highness Maharawal Sir Raghunath Singh Bahadur, K.C.I.E., who was born in 1859 and succeeded in 1890. The State is governed by the Maharawat with the help of the Heir-Apparent, and, in judicial matters, of a Committee of eleven members styled the Raj Sabha or State Council. Revenue about 4 lakhs; expenditure nearly 3½ lakhs. The financial administration is now under the direct supervision of the State.

Jodhpur State, the largest in Rajputana, also called Marwar, consists largely of desolate, sandy country. The Maharaja of Jodhpur is the head of the Rathor Clan of Rajputs and claims descent from Rama, the deified king of Ayodhya. The earliest known king of the clan lived in the sixth century from which time onwards their history is fairly clear. The foundation of Jodhpur dates from about 1212, and the foundations of Jodhpur City were laid in 1459 by Rao Jodha. The State came under British protection in 1818. In 1839 the British Government had to interfere owing to misrule, and the same thing occurred again in 1868. Jaswant Singh succeeded in 1873 and reformed the State. His son Sardar Singh was invested with powers in 1898, the minority rule having been carried on by his uncle Maharaja Sir Pratap Singh. He died in 1911 and was succeeded by his eldest son Maharaja Sumer Singh Bahadur, who was then 14 years of age. The administration of the State was carried on by a Council of Regency appointed by the Government, presided over by Major-General Maharaja Sir Pratap Singh, who abdicated the Gadi of Idar to carry on as Regent the reforms in Jodhpur which he had begun in the time of his nephew, Maharaja Sir Sardar Singh Bahadur. On the outbreak of the European War both the Maharaja and the Regent offered their services and were allowed to proceed to the Front. The young Maharaja was, for his services at the Front, honoured with an Honorary Lieutenantship in the British Army, and was invested with full ruling powers in 1916 and died on 3rd October 1918. He was succeeded by his younger brother Maharaja Umed Singhji Sahab Bahadur, who is a minor, the administration of the State being carried on by a Council of Regency presided over by Major-General H. H. Maharaja Sir Pratap Singhji Sahab Bahadur as before. Revenue 80 lakhs; expenditure 50 lakhs.

Jaisalmer State is one of the largest States in Rajputana and covers an area of 16,062 square miles. The Rulers of Jaisalmer belong to the Jadon clan and claim descent from Krishna. Jaisalmer City was founded in 1156, and the State entered into an alliance of perpetual friendship with the British Government in 1818. In 1844, after the British conquest of Sind the forts of Shahgarh, Garsia, and Ghotaru, which had

formerly belonged to Jaisalmer, were restored to the State. The present Ruling Prince is His Highness Maharajadhiraja Maharawal Shri Jawaharsinghji Bahadur. Revenue about four lakhs.

Sirohi State is much broken up by hills of which the main feature is Mount Abu, 5,650 feet. The Chiefs of Sirohi are Deora Rajputs, a branch of the famous Chauhan clan which furnished the last Hindu kings of Delhi. The present capital of Sirohi was built in 1425. The city suffered in the eighteenth century from the wars with Jodhpur and the depredations of wild Mina tribes. Jodhpur claimed suzerainty over Sirohi but this was disallowed and British protection was granted in 1823. The present ruler is His Highness Maharajah Dhiraj Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.I.E. The State is ruled by the Maharao with the assistance of a Musahib Ala who is the heir apparent and other officials. Revenue about 8 lakhs; expenditure 7 lakhs.

Jaipur State is the fourth largest in Rajputana. It consists, for the most part, of level and open country. The Maharaja of Jaipur is the head of the Kachwaha clan of Rajputs, which claims descent from Kusa, the son of Rama, king of Ajodhya, and the hero of the famous epic poem the Ramayana. The dynasty in Eastern Rajputana dates from about the middle of the twelfth century, when Amber was made the capital of a small State. The Chiefs of that State acquired fame as generals under the Mughals in later centuries, one of the best known being Sawai Jai Singh in the eighteenth century who was remarkable for his scientific knowledge and skill. It was he who moved the capital from Amber and built the present city of Jaipur and elevated the State above the principalities around. On his death a part of the State was annexed by the Jats of Bharatpur and internal disputes brought Jaipur to great confusion. British protection was extended to Jaipur in 1818, but the State continued to be disturbed and a Council of Regency was appointed, which governed up to 1851, when Maharaja Ram Singh assumed full powers. He nominated as his successor Kaim Singh who succeeded in 1880, under the name of Sawai Madho Singh II, and is the present ruler. He was born in 1861, and, in consideration of his youth, the administration was at first conducted by a Council under the joint presidency of the Maharaja and the Political Agent. He was invested with full powers in 1882. In 1887, his salute was raised from 17 to 19 guns as a personal distinction, followed in 1896 by two additional guns. In 1888 he was created a G.C.S.I. In 1901 a G.C.I.E., and in 1903 a G.C.V.O. In 1904 he was made honorary colonel of the 13th Rajputs, and in 1911 a Major General. In 1908 he was presented with the Honorary degree of LL.D. of Edinburgh University and in 1912, made a Donat of the Order of the Hospital of St. John of Jerusalem. He was made a G.B.E. in 1918. Among important events of His Highness's rule may be mentioned the raising of the Imperial Service Transport Corps in 1889-90; the construction of numerous irrigation works, hospitals and dispensaries; and the gift of 25 lakhs as an endowment to the Indian People's Famine Relief Trust. His Highness has contributed about 14 lakhs to various War funds, and 10 machine guns as a thank-offering

for the recovery of H. M. the King from his accident in France. Jaipur City is the largest town in Rajputana and is one of the few eastern cities laid out on a regular plan. It contains, in addition to the Maharaja's Palace, many fine buildings. The administration of the State is carried on by the Maharaja assisted by a Council of ten members. The military force consists of an Imperial Service Transport Corps which has twice served in Frontier campaigns and in the present war, and about 5,000 infantry, 700 cavalry and 860 artillerymen. The normal revenue is about 65 lakhs; expenditure about 59 lakhs.

Kishanghar State is in the centre of Rajputana and consists practically of two narrow strips of land separated from each other; the northern mostly sandy, the southern generally flat and fertile. The Chiefs of Kishanghar belong to the Rathor clan of Rajputs and are descended from Raja Udai Singh of Jodhpur, whose second son founded the town of Kishanghar in 1611. The State was brought under British protection in 1818. After various disputes necessitating British mediation, the State entered into good hands and was well ruled during the latter part of the nineteenth century. The present ruler is Lieut.-Colonel His Highness Maharajadhiraj Sir Madan Singh Bahadur, K.C.S.I., K.C.I.E., Umdai Rajhai-Buland Makan, who was born in 1884 and was invested with powers in 1905. He administers the State with the help of a Council of two members. His Highness served in France in 1914-15 and was mentioned in despatches by Field-Marshal Lord French. Revenue 5·7 lakhs; Expenditure 4·6 lakhs.

Lawa State, or takurat, of Rajputana is a separate chiefship under the protection of the British Government and independent of any Native States. It formerly belonged to Jaipur and then became part of the State of Tonk. In 1867, the Nawab of Tonk murdered the Thakur's uncle and his followers, and Lawa was then raised to its present State. The Thakurs of Lawa belonged to the Naruka sept of the Kachwaha Rajputs. The present Thakur, Mangal Singh, was born in 1873, and succeeded to the estate in May, 1892. Revenue about Rs. 11,000.

Bundi State is a mountainous territory in the south-east of Rajputana. The Chief of Bundi is the head of the Hara sept of the great clan of Chauhan Rajputs and the country occupied by this sept has for the last five or six centuries been known as Haraoti. The State was founded in the early part of the thirteenth century and constant feuds with Mewar and Malwa followed. It threw in its lot with the Mahomedan emperors in the sixteenth century. In later times it was constantly ravaged by the Marathas and Pindaries and came under British protection in 1818 at which time it was paying tribute to Holkar. The present ruler of this State—which is administered by the Maharao Raja and a Council of 8 in an old-fashioned but popular manner—is His Highness Maharao Raja Sir Raghubir Singh Bahadur, G.C.I.E., G.C.V.O., G.C.S.I. He was born in 1869 and succeeded in 1889. Revenue about 10 lakhs; Expenditure 9·6 lakhs.

Tonk State—Partly in Rajputana and partly in Central India, consists of six districts separated from each other. The ruling family

belongs to the Salarzai Clan of the Bunerwal tribe. The founder of the dynasty was Amir-ud-Dowla Nawab Mahomed Amir Khan Bahadur, General of the Army collected at the end of the eighteenth century. The foundation of the State was laid down in the year 1817. His grandson was deposed. The present ruler of the State is His Highness Amir-ud-Dowla Wazirul Mulk Nawab Sir Hafiz Muhammad Ibrahim Ali Khan Bahadur, G.C.I.E., G.C.S.I. The administration is conducted by the Nawab and a Council of three members. Revenue 17 lakhs; Expenditure 16 lakhs.

Shahpura Chiefship is a small pastoral State. The ruling family belongs to the Seesodia clan of Rajputs. The Chiefship came into existence about 1629, being a grant from the Emperor Shah Jahan to one Sujan Singh. The present Chief is Sir Nahar Singh, K.C.I.E., who succeeded by adoption in 1870 and received full powers in 1876. In addition to holding Shahpura by grant from the British Government the Raja Dhiraj possesses the estate of Kachhola in Udaipur for which he pays tribute and does formal service as a great noble of that State. Revenue 3 lakhs; Expenditure 2·6 lakhs.

Bharatpur State.—Consists largely of an immense alluvial plain, watered by the Banganga and other rivers.

The present ruling family are Jats, of the Sinsinawal clan who trace their pedigree to the eleventh century. The Bharatpur ruling family is of the Sinsinawal clan named so after their old village Sinsini. Bharatpur was the first State in Rajputana that made alliance with the British Government in 1803, helped Lord Lake with 5,000 horse in his conquest of Agra and battle of Laswari wherein the Maratha power was entirely broken and received 5 districts as reward for the service. In 1804, however, Bharatpur sided with Jaswant Rao Holkar against the Government which resulted in a fight with the Government. Peace was re-established in 1805 under a treaty of alliance and it continues in force. The State, being usurped by Durjan Sal in 1825, the British Government took the cause of the rightful heir Maharaja Balwant Singh Sahab. Bharatpur was besieged by Lord Combermere, and as the faithful subjects almost all joined the British Army, the result could not be otherwise than capture of the Capital and restoration of the State to its rightful owner. Bharatpur rendered valuable service to the British Government during the Mutiny. The present Chief is a minor, Maharaja Sawai Kishen Singh Bahadur, who was born in 1899 and succeeded in the following year his father Ram Singh, who was deposed. The administration is carried on by a Council of four Members presided over by a Political Agent. Revenue 32 lakhs. Expenditure 31 lakhs.

Dholpur State, the easternmost State in Rajputana, has changed hands an unusual number of times. It was occupied by the British in 1803 and restored to the Gwalior Chief who formerly owned it, but by a fresh arrangement of 1805 it was constituted a State with other districts and made over to Maharaj Rana Kirat Singh, in exchange for his territory of Gohad which was given up to Sindhia. The ruling family are Jats of the Bamraolia clan, the

latter name being derived from a place near Agra where the family held land in the twelfth century. The present chief—who is assisted in the administration by three Ministers—is H. H. Maharaj Rana Sir Udaibhan Singh Lokinder Bahadur. He was born in 1893 and succeeded in 1911. He was created a K.C.S.I. in January 1918. Revenue 15 lakhs; Expenditure 12 lakhs.

Karauli State is a hilly tract in Eastern Rajputana, of which the ruler is the head of the Jadon clan of Rajputs who claim direct descent from Krishna and were at one time very powerful. On the decline of the Mughal power the State was subjugated by the Marathas, but by the treaty of 1817 it was taken under British protection. Its subsequent history is of interest chiefly for a famous adoption case, in 1852. The present ruler is H. H. Maharaja Sir Banwar Pal Deo Bahadur, G.C.I.E., who was born in 1864, installed in 1889, and invested with powers in 1889. He is assisted by a council of two members. Revenue 6 lakhs; Expenditure 5 lakhs.

Kotah State belongs to the Hara sect of the clan of Chauhan Rajputs, and the early history of their house is, up to the 17th century, identical with that of the Bundi family from which they are an offshoot. Its existence as a separate State dates from 1625. It came under British protection in 1817. The present ruler is H. H. Lieut.-Colonel Maharao Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., G.B.E., who was born in 1873 and invested with full powers in 1896. In administration he is assisted by a Diwan (Dewan Bahadur Chaube Raghunath Das, C.S.I.) The most important event of his rule has been the restoration, on the deposition of the late chief of the Jhalawar State, of 15 out of the 17 districts which had been ceded in 1838 to form that principality. Revenue 46 lakhs; Expenditure 42 lakhs.

Jhalawar State (for history see under Kotah) consists of two separate tracts in the south-east of Rajputana. The ruling family belongs to the Jhala clan of Rajputs. The last ruler was deposed for misgovernment in 1896, part of the State was reassigned to Kotah, and Kunwar Bhawani Singh, son of Thakur Chhatarsalji of Fatehpur, was selected by Government to be the Chief of the new State. He was born in 1874 and was created a K.C.S.I. in 1908. He is assisted in administration by a Council, has established many useful institutions, and has done much to extend education in the State. Revenue 6 lakhs.

Bikaner State, the second largest in Rajputana, consists largely of sandy and ill-watered land. It was founded by Bika, a Rathor Rajput, the sixth son of a Chief of Marwar, in the 15th century. Rai Singh, the first Raja, was one of Akbar's most distinguished generals, and built the main fort of Bikaner. Throughout the 18th century there was constant fighting between Bikaner and Jodhpur. In 1818 the Maharaja invited the assistance of British troops to quell a rebellion, and subsequently a special force had to be raised to deal with the dacoits on the southern borders of the State. The Thakurs of the State continued to give trouble up to the eighties. The present Ruler is Major-General H. H. Maharajah Sri Sir

Ganga Singhji Bahadur, G.C.S.I., G.C.I.E., A.D.C. to the King, who was born in 1880 and invested with full powers in 1898. He raised an Imperial Service Camel Corps which served in China and Somaliland, and His Highness served in the former campaign himself, being mentioned in despatches. In 1900 he was awarded the first class Kaisar-i-Hind medal for the active part he took in relieving the great famine of 1899-1900. He is an honorary LL.D. of Cambridge. In administration His Highness is assisted by five secretaries, to each of whom are allotted certain departments; and there is a council of five members which is primarily a judicial body, but is consulted in matters of importance. The revenue of the State is now about sixty lakhs; there are no debts. A coal mine is worked at Palana, 14 miles south of the capital.

Alwar State is a hilly tract of land in the East of Rajputana. Its Rulers belong to the Lalawat Naruka branch of the Kuchhwaha Kshatrias, Solar Dynasty. This ruling family is descended from Raja Udai Karan, who was the common ancestor of both Alwar and Jaipur. The State was founded by Pratab Singh, who before his death in 1791 had secured possession of large portions of the Jaipur State. His successor sent a force to co-operate with Lord Lake in the war of 1803 and an alliance was concluded with him in that year, when the boundaries of the State as now recognised were fixed. Various rebellions and disputes about succession mark the history of the State during the earlier part of the nineteenth century. The

present chief, H. H. Lt.-Col. Sewai Maharaja Sir Jey Singhji Bahadur, K.C.S.I., K.C.I.E., who was born in 1882, succeeded his father in 1892 and was invested with powers in 1903. He carries on the administration with the assistance of a Council of four Ministers, Members of His Highness' Council and various heads of departments. The normal revenue and expenditure are about Rs. 32 lakhs a year. The State maintains an Imperial service of cavalry, another of infantry, and an irregular force. The late Maharaja was the first chief in Rajputana to offer (in 1888) aid in the defence of the Empire. The capital is Alwar on the Rajputana-Malwa Railway, 98 miles south-west of Delhi.

RAJPUTANA.

Officiating Agent to Governor-General—A. T. Holme.

UDAIPUR.

Resident—Lt. Col. P. T. A. Spence.

JAIPUR.

Resident—Lieut.-Col. R. A. E. Benn.

EASTERN RAJPUTANA STATES.

Political Agent—C. C. Watson, C.I.E.

WESTERN RAJPUTANA STATES.

Resident—L. W. Reynolds, M.C., C.I.E.

HARAOOTI AND TONK.

Political Agent—Major H. V. Biscoe.

CENTRAL INDIA AGENCY.

Central India is the name given to the country occupied by the Native States grouped together under the supervision of the Political Officer in charge of the Central India Agency. These States lie between 21° 24' and 26° 32' N. lat. and between 74° 0' and 83° 0' E. long. The British districts of Jhansi and Lalitpur divide the agency into two main divisions—Bundelkhand and Baghelkhand lying to the east, and Central India proper to the west. The total area covered is 78,772 square miles, and the population (1911) amounts to 93,980. The great majority of the people are Hindus. The principal States are eight in number—Gwalior, Indore, Bhopal, Rewa, Dhar, Jaora, Datia and Orchal of which two, Bhopal and Jaora, are Mahomedan and the rest are Hindu. Besides these there are a multitude of petty States held by their rulers under the immediate guarantee of the British Government, but having feudal relations with one or other of the larger States. The total number of States amounts to 153. For administrative purposes they are divided into the following groups: Baghelkhand Agency, 12 States (principal State Rewa); Bhopal Agency, 19 States (principal Bhopal) State Bhopawar Agency, 21 States (principal State Dhar); Bundelkhand Agency, 22 States (principal States, Datia and Orchal); Gwalior Agency, 32 States (principal State, Gwalior); Indore Residency, 9 States (principal State, Indore); Malwa Agency, 38 States (principal State, Jaora). The Agency may be divided into three natural divisions, the plateau, lowlying, and hilly. The plateau tract includes the Malwa

plateau, the Highland tract stretching from the great wall of the Vindhya to Marwar, the land of open rolling plains. The lowlying tract embraces Northern Gwalior and stretches across into Bundelkhand and Baghelkhand up to the Kaimur Range. The hilly tract lies along the ranges of the Vindhya and the Satpuras. There agriculture is little practised, the inhabitants being mostly members of the wild tribes. The territories of the different States are much intermingled, and their political relations with the Government of India and each other are very varied. Eleven Chiefs have direct treaty engagements with the British Government.

The following list gives the approximate size, population and revenue of the eight principal States above mentioned:—

Name.	Area in square miles.	Population.	Revenue.
			Rs. lakhs,
Gwalior ..	25,133	3,102,279	140
Indore ..	9,506	1,007,856	70
Bhopal ..	6,902	730,383	30
Rewah ..	13,000	1,514,843	53
Dhar ..	1,783	154,070	9
Jaora ..	568	75,951	8
Datia ..	911	154,603	9
Orcha ..	2,079	330,032	11

Gwalior.—The house of Scindia traces its descent to a family of which one branch held the hereditary post of patel in a village near Satara. The head of the family received a patent of rank from Aurangzeb. The founder of the Gwalior House was Ranoji Scindia who is said to have been a personal attendant on the Peshwa Baji Rao. In 1726 together with Malhar Rao Holkar, the founder of the house of Indore, he was authorised by the Peshwa to collect revenues and he fixed his headquarters at the ancient city of Ujjain, which became the capital of the Scindia dominions. Gwalior subsequently played a leading part in shaping the history of India. The reverses which Scindia's troops met with at the hands of the British in 1778 and 1780 led to the treaty of Salbai (1782), which made the British arbiters in India and recognised Scindia as an independent Chief and not as a vassal under the Peshwa. Subsequently Scindia's military power, developed by the French Commander DeBoigne, was completely destroyed by the British victories of Ahmednagar, Assaye, Asirgarh and Laswari.

The present ruler is Major-General H. H. Maharaja Sir Madho Rao Alijah Bahadur Scindia, G.C.V.O., G.C.S.I., A.D.C. to the King. He succeeded in 1886 and obtained powers in 1894. In 1901 he went to China during the war; he holds the rank of honorary Major-General of the British Army and the honorary degrees of LL.D., Cambridge, and D.C.L., Oxon. He is also a Donat of the Order of St. John of Jerusalem in England. The administration is controlled by the Maharaja assisted by five members of the Majlis-i-khas.

The northern part of the State is traversed by the G. I. P. Railway and two branches run from Bhopal to Ujjain and from Bina to Baran. The Gwalior Light Railway runs for 250 miles from Gwalior to Bhind, from Gwalior to Sheopur and from Gwalior to Sipri. The main industries are cotton ginning, which is done all over the State; fine muslins made at Chanderi, leather work, etc. The State maintains three regiments of Imperial Service Cavalry, two battalions of Imperial Service Infantry and a transport corps. Lashkar, the capital city, is two miles to the south of the ancient city and the fort of Gwalior. Annual expenditure 144 lakhs.

Indore.—The Holkars of Indore belong to the shepherd class, the founder of the house, Malhar Rao Holkar, being born in 1693. His soldierly qualities brought him to the front under the Peshwa, who took him into his service and employed him in his conquests. When the Maratha power was broken at the battle of Panipat, in 1761, Malhar Rao had acquired vast territories stretching from the Deccan to the Ganges. He was succeeded by a lunatic grandson who again was succeeded by his mother, Ahilya Bai, whose administration is still looked upon as that of a model ruler. Disputes as to the succession and other causes weakened this powerful State, and, when it assumed a hostile attitude on the outbreak of war in 1817 between the British and the Peshwa, Holkar was compelled to come to terms. The Treaty of Mandasari in 1818 still governs the regulations existing between the State and the British Government. In the mutiny of 1857, when Holkar was unable to control his troops he personally gave every possible assistance to the authorities at Mhow,

In 1903 Sivaji Rao, who died in 1908, abdicated in favour of his son, His Highness Maharaja Tukoji Rao Holkar, the present ruler, who was born in 1890, and was formally invested with ruling powers in November 1911. In the administration His Highness is assisted by his Chief Minister and a Council of 5 Ministers. The State Army consists of 519 Imperial Service Troops and 1,629 State forces. The capital is Indore City on the Ajmer-Khandwa Section of the Rajputana-Malwa Railway. The ordinary revenue is estimated at Rs. 85 lakhs.

Bhopal.—The principal Mussalman State in Central India, ranks next in importance to Hyderabad among the Muhammadan States of India. The ruling family was founded by Dost Mohammed Khan, a Tirah Afghan in the service of Aurangzeb. He was nominated Governor of the Bairaia Ilaka and succeeded in establishing eventually his independent authority in Bhopal and its neighbourhood. In the early part of the 19th century, the Nawabs successfully withstood the inroads of Scindia and Bhonsla and by the agreement of 1817 Bhopal undertook to assist the British with a contingent force and to co-operate against the Pindari bands.

The present Ruler of the State, Her Highness Nawab Sultan Jahan Begum, C.I., G.C.S.I., G.C.I.E., G.B.E., is the third in the successive line of lady-rulers, who have ruled the destinies of the State with marked ability. Having succeeded in 1901, she personally conducts, and has introduced a number of reforms in, the administration of her State. Her eldest son, Hon. Colonel Nawab Mahommed Nasrullah Khan, controls the Forest Department and her second son Hon. Major Nawabzada Mahommed Obaidullah Khan, C.S.I., who holds the rank of Brig.-Genl. in the State Army, is the Commander-in-Chief of the State Forces, while the youngest Nawabzada Mahommed Hamidullah Khan, B.A. and Hon. Major in the Bhopal Army, is the head of her Highness' Secretariat. The State maintains one regiment each of Imperial Service Cavalry and Infantry. The Capital, Bhopal City, on the northern bank of an extensive lake is situated at the junction of the G. I. P. Ry. with the Bhopal Ujjain Railway.

Rewah.—This State lies in the Baghelkhand Agency, and falls into two natural divisions separated by the scarp of the Kaimur range. Its Chiefs are Baghel Rajputs descended from the Solanki clan which ruled over Gujrat from the tenth to the thirteenth century. In 1812, a body of Pindaries raided Mirzapur from Rewah territory and the chief, who had previously rejected overtures for an alliance, was called upon to accede to a treaty acknowledging the protection of the British Government. During the Mutiny, Rewah offered troops to the British, and for his services then, various parganas, which had been seized by the Marathas, were restored to the Rewah Chief. The present chief is H. H. Maharaja Sir Venkat Raman Singh, G.C.S.I., who was born in 1876. He is assisted in the administration by two Commissioners, one for revenue matters and one for judicial. The State force consist of about 1,700 men. The State is famous for its archaeological remains and is rich in minerals, coal being mined at Umaria. The average expenditure is Rs. 11 lakhs,

Dhar.—This State, under the Agency for Southern States in Central India, takes its name from the old city of Dhar, long famous as the capital of the Paramara Rajputs, who ruled over Malwa from ninth to the thirteenth century and from whom the present chiefs of Dhar—Ponwar Marathas—claim descent. In the middle of the 18th century the Chief of Dhar, Anand Rao, was one of the leading chiefs of Central India, sharing with Holkar and Sindhia the rule of Malwa. But in 1819, when a treaty was made with the British, the State had become so reduced that it consisted of little more than the capital. The ruler is H. H. Maharaja Sir Udaji Rao Ponwar, K.C.S.I., K.B.E., who was born in 1886, and has control of all civil, judicial, and ordinary administrative matters. There are 22 feudatories, of whom 13 hold a guarantee from the British Government. The average expenditure is about 12 lakhs.

Jaora State.—This State is in the Malwa Agency covering an area of about 600 square miles with a total population of 82,497, and has its headquarters at Jaora town. The first Nawab was an Afghan from Swat, who had come to India to make his fortune, found employment under the freebooter Amir Khan, and obtained the State after the treaty of Mandasore in 1818. The present chief is Major H. H. Sir Iftikhar Ali Khan Bahadur, K.C.I.E., who was born in 1883 and is an Honorary Major in the Indian Army. The soil of the State is among the richest in Malwa, being mainly of the best black cotton variety, bearing excellent crops of poppy. The average annual revenue is Rs. 9,78,909.

Rutlam.—Is the premier Rajput State in the Malwa Agency. It covers an area of 871 square miles, including that of the Jagir of Khera in the Kushalgarh Chiefship, which pays an annual tribute to the Ratlam Darbar. The State was founded by Raja Ratansinghji, a great grandson of Raja Udai Singh of Jodhpur, in 1652. The Raja of Ratlam is the religious head of the Rajputs of Malwa, and important caste questions are referred to him for decision. The present Chief of Rutlam is Col. His Highness Raja Sir Sajjan Singh, K.C.S.I., who was born in 1880, educated at Daly College, Indore, received military training in Imperial Cadet Corps and invested with full powers in 1898. The administration is carried on under him by Rutlam State Council composed of four members. His Highness served in the war in France and Egypt from 1915 to 1918, was mentioned in despatches and received the Croix d'Officiers de legion d'Honneur. He is also Regent of Rewa State. Salute: 13 guns.

Senior Member of Council—Raj Kumar Sirdar Singh of Shahpura.

Datia State.—The chiefs of this State, in the Bundelkhand Agency, are Bundela Rajputs of the Orchha house. The territory was granted by the chief of Orchha to his son Bhagwan Rao in 1626, and this was extended by conquest and by grants from the Delhi emperors. The present chief is H. H. Maharaja Lokendra Sir Govind Singh Bahadur, K.C.S.I., who was born in 1886 and succeeded in 1907. The heir-apparent, Raja Bahadur Balbhadra Singh (b 1907) is being educated at the Daly College.

Orchha State.—The chiefs of this State are Bundela Rajputs claiming to be descendants of the Gaharwars of Benares. It was founded as an independent State in 1048 A. D. It entered into relations with the British by the treaty made in 1812. The present ruler is His Highness Sir Pratap Singh, G.C.S.I., G.C.I.E., who was born in 1854. He has the title of His Highness Saramad-i-raihai-Bundelkhand Maharaja Mahendra Sawai Bahadur. The present chief enjoys a salute of 17 guns. The State has a population of 330,032 and an area of 2,080 square miles. The capital is Tikamgarh, 36 miles from Lalitpur on the G. I. P. Railway. Orchha, the old capital, has fallen into decay but is a place of interest on account of its magnificent buildings of which the finest were erected by Bir Singh Deo, the most famous ruler of the State (1605-1627).

Agent to Governor-General—O. V. Bosanquet, C.S.I., C.I.E.

GWALIOR.

Resident—W. E. Jardine, C.I.E., I.C.S.

BHOPAL.

Political Agent—Major C.E. Luard.

BUNDELKHAND.

Political Agent—Lieut.-Col. A. B. Minchin.

BAGHELKHAND.

Political Agent—P. B. Warburton, I.C.S.

Sikkim.

Sikkim is bounded on the north and north-east by Tibet, on the south-east by Bhutan, on the south by the British district of Darjeeling, and on the west by Nepal. The population consists of Bhutias, Lepchas, and Nepalese. It forms the direct route to the Chumbi Valley in Tibet. The main axis of the Himalayas, which runs east and west, forms the boundary between Sikkim and Tibet. The Singalila and Chola ranges, which run southwards from the main chain, separate Sikkim from Nepal on the west, and from Tibet and Bhutan on the east. From the eastern flank of the Singalila range rise the great snow peaks of Kinchinjunga (28,146 feet), one of the highest mountains in the world; it throws out a second spur terminating at Tendong. The Chola range which is much loftier than that of Singalila, leaves the main chain at the Dongkya mountain.

Tradition says that the ancestors of the Rajas of Sikkim originally came from eastern Tibet. The State was twice invaded by the Gurkhas at the end of the eighteenth century. On the outbreak of the Nepal War in 1814, the British formed an alliance with the Raja of Sikkim and at the close of the war the Raja was rewarded by a considerable cession of territory. In 1835 the Raja granted the site of Darjeeling to the British and received Rs. 12,000 annually in lieu of it. The State was previously under the Government of Bengal, but was brought under the direct supervision of the Government of India in 1906. The State is thinly populated, the area being 2,818 square miles, and the population 87,920, chiefly Buddhists and Hindus. The most im-

portant crops are maize and rice. There are several trade routes through Sikkim from Darjeeling District into Tibet. In the convention of 1890 provision was made for the opening of a trade mart but the results were disappointing, and the failure of the Tibetans to fulfil their obligations resulted in 1904 in the despatch of a mission to Lhasa, where a new convention was signed. Trade with the British has increased in recent years, and is now between 40 and 50 lakhs yearly. A number of good roads have been constructed in recent years. The present ruler, His Highness Maharajah Tashi Namgyal, C.I.E., was born in 1893 and succeeded in 1914. His Highness was invested with full ruling powers on the 5th April 1918. The title of a C.I.E. was conferred upon the Maharaja on the 1st January 1918. The average revenue is Rs. 2,62,000.

Political Officer in Sikkim:—Major W. L. Campbell, C.I.E.

Bhutan.

Bhutan extends for a distance of approximately 190 miles east and west along the southern slopes of the central axis of the Himalayas, adjacent to the northern border of Eastern Bengal and Assam. Its area is 18,000 square miles and its population, consisting of Buddhists and Hindus, has been estimated at 300,000. The country formerly belonged to a tribe called Tek-pa, but was wrested from them by some Tibetan soldiers about the middle of the seventeenth century. British relations with Bhutan commenced in 1772 when the Bhotias invaded the principality of Cooch Behar and British aid was invoked by that State. After a number of raids by the Bhutanese into Assam, an envoy (the Hon. A. Eden) was sent to Bhutan, who was grossly insulted and compelled to sign a treaty surrendering the Duars to Bhutan. On his return the treaty was disallowed and the Duars annexed. This was followed by the treaty of 1865, by which the State's relations with the Government of India were satisfactorily regulated. The State formerly received an allowance of half a lakh a year from the British Government in consideration of the cession in 1865 of some areas on the southern borders. This allowance was doubled by a new treaty concluded in January 1910, by which the Bhutanese Government bound itself to be guided by the advice of the British Government in regard to its external relations, while the British Government undertook to exercise no interference in the internal administration of Bhutan. On the occasion of the Tibet Mission of 1904, the Bhotias gave strong proof of their friendly attitude. Not only did they consent to the survey of a road through their country to Chumbi, but their ruler, the Tongsa Penlop, accompanied the British troops to Lhasa, and assisted in the negotiations with the Tibetan authorities. For these services he was made a K.C.I.E., and he has since entertained the British Agent hospitably at his capital. The ruler is now known as H. H. the Maharaja of Bhutan, Sir Ugen Wangchuk, K.C.S.I., K.J.I.E. At the head of the Bhutan Government, there are nominally two supreme authorities; the Dharma Raja, known as Shapting Renipoche, the spiritual head; and the Deb or Depa Raja, the

temporal ruler. The Dharma Raja is regarded as a very high incarnation of Buddha, far higher than the ordinary incarnations in Tibet, of which there are several hundreds. On the death of a Dharma Raja a year or two is allowed to elapse, and his reincarnation then takes place, always in the Choje, or royal family of Bhutan.

Cultivation is backward and the chief crop is maize. The Military force consists of local levies under the control of the different chiefs. They are of no military value.

Nepal.

The kingdom of Nepal is a narrow tract of country extending for about 520 miles along the southern slope of the central axis of the Himalayas. It has an area of about 54,000 square miles, with a population of about 5,000,000, chiefly Hindus. The greater part of the country is mountainous, the lower slopes being cultivated. Above these is a rugged broken wall of rock leading up to the chain of snow-clad peaks which culminate in Mount Everest (29,002 feet) and others of slightly less altitude. The country before the Gurkha occupation was split up into several small kingdoms under Newar kings. The Gurkhas under Prithvi Narayan Shah overran and conquered the different kingdoms of Patan, Kathmandu, and Bhatgaon, and other places during the latter half of the 18th century and since then have been rulers of the whole of Nepal. In 1846 the head of the Rana family obtained from the sovereign the perpetual right to the office of Prime Minister of Nepal, and the right is still enjoyed by his descendant. In 1850 Jung Bahadur paid a visit to England and was thus the first Hindu Chief to leave India and to become acquainted with the power and resources of the British nation. The relations of Nepal with the Government of India are regulated by the treaty of 1816 and subsequent agreements by which a representative of the British Government is received at Kathmandu. This British representative has come to be styled as Resident though his function differs much from that of a Resident at the courts of the Native States of India. By virtue of the same treaty Nepal maintains a Representative at Delhi and her treaty relations with Tibet allow her to keep a Resident at Lhasa of her own. Her relation with China is of a friendly nature. Ever since the conclusion of the treaty of 1816 the friendly relations with the British Government have steadily been maintained and during the rule of the present Prime Minister it has been at its height as is evidenced by the valuable friendly help in men and money which has been given and which was appreciatively mentioned in both the Houses of Parliament and by Mr. Asquith in his Guildhall speech in 1915. The message from His Majesty the King Emperor to the Nepalese Prime Minister sent on the termination of hostilities and published at the time as also the Viceroy's valedictory address to the Nepalese contingent on the eve of their return home after having laudably fulfilled their mission in India eloquently and gratefully acknowledged the valuable help rendered by Nepal during the four and a half years of war.

From the foregoing account of the history of Nepal it will be seen that the Government of

the country has generally been in the hands of the Minister of the day. Since the time of Jung Bahadur this system of government has been clearly laid down and defined. The sovereign, or Maharajadhiraja, as he is called, is but a dignified figure-head, whose position can best be likened to that of the Emperor of Japan during the Shogunate. The present ruler, His Majesty Maharajadhiraja Tribhubana Bir Bikram Jung Bahadur Shah Bahadur Shum Shere Jung, ascended the throne on the death of his father in 1911. The real ruler of the country is the Minister who, while enjoying complete monopoly of power, couples with his official rank the exalted title of Maharaja. Next to him comes the Commander-in-Chief, who ordinarily succeeds to the office of Minister.

The present Minister at the head of affairs of Nepal is Maharaja Sir Chandra Shum Shere

Jung Bahadur Rana, G.C.B., G.C.S.I., G.C.V.O., D.C.L. and Honorary General in the British Army. He has been Prime Minister and Marshal of Nepal since June, 1901.

Rice, wheat and maize form the chief crops in the lowlands. Mineral wealth is supposed to be great, but, like other sources of revenue, has not been developed. Communications in the State are primitive. The revenue is about two crores of rupees per annum. The standing army is estimated at 45,000, the high posts in it being filled by relations of the Minister. The State is of considerable archaeological interest and many of the sites connected with scenes of Buddha's life have been identified in it by the remains of inscribed pillars.

Resident, Lieut.-Col. W. F. T. O'Connor, C.I.E.

NORTH-WEST FRONTIER STATES.

The native states of the North-West Frontier Provinces are Amb, Chitral, Dir, Nawagai (Bajaur), and Phulera. The total area is about 7,704 square miles and the population, mainly Mahomedan, is 1,622,094. The average annual revenue of the first four is about Rs. 4,65,000; that of Phulera is unknown.

Amb.—Is only a village on the western bank of the Indus in Independent Tanawala.

Chitral.—Runs from Dir to the south of the Hindu-Kush range in the north, and has an area of about 4,500 square miles. The ruling dynasty has maintained itself for more than three hundred years, during the greater part of which the State has constantly been at war with its neighbours. It was visited in 1885 by the Lockhart Mission, and in 1889, on the establishment of a political agency in Gilgit, the ruler of Chitral received an annual subsidy from the British Government. That subsidy was increased two years later on condition that the ruler, Amam-ul-Mulk, accepted the advice of the British Government in all matters connected with foreign policy and frontier defence. His sudden death in 1892 was followed by a dispute as to the succession. The eldest son Nizam-ul-Mulk was recognised by Government, but he was murdered in 1895. A religious war was declared against the infidels and the Agent at Gilgit, who had been sent to Chitral to report on the situation, was besieged with his escort and a force had to be despatched (April 1895) to their relief.

The three valleys of which the State consists are extremely fertile and continuously culti-

vated. The internal administration of the country is conducted by the Mehtar, and the foreign policy is regulated by the Political Agent.

Dir.—The territories of this State, about 5,000 square miles in area, include the country drained by the Panjkora and its affluents down to the junction of the former river with the Bajaur Rud, and also the country east of this from a point a little above Tirah in Upper Swat down to the Dush Khel Country, following the right bank of the Swat river throughout. The Khan of Dir is the overlord of the country, exacting allegiance from the petty chiefs of the clans. Dir is mainly held by Yusufzai Pathans, the old non-Pathan inhabitants being now confined to the upper portion of the Panjkora Valley known as the Bashkar.

Bajaur.—Nawagai is a tract of country included in the territories collectively known as Bajaur which is bounded on the north by the Panjkora river, on the east by the Utman Khel and Mohmand territories and on the west by the watershed of the Kunar river which divides it from Afghanistan. The political system, if it can be termed system, is a communal form of party government, the country being divided into several minor Khanates, each governed by a chieftain. But virtually the authority of the chieftains is limited to the rights to levy tithe, or *ushar*, when they can enforce its payment, and to exact military service (if the tribesmen choose to render it.)

Political Agent for Dir, Swat and Chitral, Major F. H. Humphrys, I. A.

NATIVE STATES UNDER LOCAL GOVERNMENTS.

The Madras Presidency includes 5 Native States covering an area of 10,087 square miles. Of these the States of Travancore and Cochin represent ancient Hindu dynasties. Pudukottai is the inheritance of the chieftain called the Tondiman. Banganapalle and Sandur, two petty States, of which the first is ruled by a Nawab, lie in the centre of two British districts.

Name.	Area sq. miles.	Popula- tion.	Approx. Revenue in lakhs of rupees.
Travancore ..	7,129	3,428,975	128
Cochin ..	1,361	918,110	47
Pudukottai ..	1,178	411,878	16
Banganapalle ..	255	39,356	2·8
Sandur ..	161	13,517	1·7

Travancore.—This State occupies the south-west portion of the Indian Peninsula, forming an irregular triangle with its apex at Cape Comorin. The early history of Travancore is in great part traditional; but there is little doubt that H. H. the Maharaja is the representative of the Chera dynasty, one of the three great Hindu dynasties which exercised sovereignty at one time in Southern India. The petty chiefs, who had subsequently set up as independent rulers within the State, were all subdued, and the whole country, included within its present boundaries, was consolidated and brought under one rule, by the Maharaja Marthanda Varma (1729-58). The English first settled at Anjengo, a few miles to the north of Trivandrum, and built a factory there in 1684. In the wars in which the East India Company were engaged in Madras and Tinnevely, in the middle of the 18th century, the Travancore State gave assistance to the British authorities. Travancore was reckoned as one of the staunchest allies of the British Power and was accordingly included in the Treaty made in 1784 between the East India Company and the Sultan of Mysore. To protect the State from possible inroads by Tippu, an arrangement was come to in 1788 with the East India Company, and in 1795 a formal treaty was concluded, by which the Company agreed to protect Travancore from all foreign enemies. In 1805 the annual subsidy to be paid by Travancore was fixed at 8 lakhs of rupees.

The present ruler is His Highness Maharaja Sir Rama Varma, G.C.S.I., G.C.I.E., who was born in 1857 and ascended the masnad in 1885. The government is conducted in his name with the assistance of a Dewan (Dewan Bahadur M. Krishnan Nair). The work of legislation is entrusted to a Council brought into existence in 1888. An assembly known as the Sri Mulam Popular Assembly meets once a year, when its members are able to bring suggestions before the Dewan. The State supports a military force of 1,472 men. Education has advanced consider-

ably in recent years and the State takes a leading place in that respect. The principal food grain grown is rice, but the main source of agricultural wealth is the cocoanut. Other crops are pepper, areca-nut, jack-fruit and tapioca. Cotton weaving and the making of matting from the coir are among the chief industries. The State is well provided with roads, and with a natural system of back-waters, besides canals and rivers navigable for country crafts. Two lines of railways intersect the country, the Cochin-Shoranore in the north-west and the Tinnevely-Quilon passing through the heart of the State. A third line, from Quilon to Trivandrum, was opened on the 1st January 1918. The capital is Trivandrum.

Political Agent: H. L. Braidwood, I.C.S.

Cochin.—This State on the south-west coast of India is bounded by the Malabar District of the Madras Presidency and the State of Travancore. Very little is known of its early history. According to tradition, the Rajas of Cochin hold the territory in right of descent from Cheraman Perumal, who governed the whole country of Kerala, including Travancore and Malabar, as Viceroy of the Chola Kings about the beginning of the ninth century, and afterwards established himself as an independent Ruler. In 1502, the Portuguese were allowed to settle in what is now British Cochin and in the following year they built a fort and established commercial relations in the State. In the earlier wars with the Zamorin of Calicut, they assisted the Rajas of Cochin. The influence of the Portuguese on the west coast began to decline about the latter part of the seventeenth century, and in 1663 they were ousted from the town of Cochin by the Dutch with whom the Raja entered into friendly relations. About a century later, in 1759, when the Dutch power began to decline, the Raja was attacked by the Zamorin of Calicut, who was expelled with the assistance of the Raja of Travancore. In 1776, the State was conquered by Hyder Ali, to whom it remained tributary and subordinate, and subsequently to his son, Tippu Sultan. A treaty was concluded in 1791 between the Raja and the East India Company, by which His Highness agreed to become tributary to the British Government for his territories which were then in the possession of Tippu, and to pay a subsidy.

His Highness Raja Sri Sir Rama Varmah, G.C.S.I., G.C.I.E., who was born in 1852, and who ascended the Masnad in 1895, having abdicated in December, 1914, His Highness Sri Sir Rama Varmah, G.C.I.E., who was born on 6th October, 1858, succeeded to the throne and was duly installed as Raja on the 21st January 1915. The administration is conducted under the control of the Raja whose chief Minister and Executive Officer is the Dewan Rao Bahadur T. Vijayaraghava Charya. The forests of Cochin form one of its most valuable assets. They abound in teak, ebony, blackwood, and other valuable trees. Rice forms the staple of cultivation. Cocoanuts are largely raised in the sandy tracts, and their products form the chief exports of the State. Communications by road and back-waters are good, and the State owns a line of railway from

Shoranore to Ernakulam, the capital of the State, and a Forest Steam Tramway used in developing the forests. The State supports a force of 24 officers and 250 men.

Political Agent : H. L. Braidwood, I.C.S.

Pudukkottai.—This State is bounded on the north and west by Trichinopoly, on the south by Madura and on the east by Tanjore. In early times a part of the State belonged to the Chola Kings and the southern part to the Pandya Kings of Madura. Relations with the English began during the Carnatic wars. During the siege of Trichinopoly by the French in 1752, the Tondiman of the time did good service to the Company's cause by sending them provisions, although his own country was on at least one occasion ravaged as a consequence of his fidelity to the English. In 1756 he sent some of his troops to assist Muhammad Yusuf, the Company's sepooy commandant, in settling the Madura and Tinnevely countries. Subsequently he was of much service in the wars with Haidar Ali. His services were rewarded by a grant of territory subject to the conditions that the district should not be alienated (1806). Apart from that there is no treaty or arrangement with the Raja. The present ruler is His Highness Sri Brihadamba Das, Sir Marthanda Bhairava Tondiman Bahadur, C.C.I.E., who is eighth in descent from the founder of the family. He succeeded in 1886. The Collector of Trichinopoly is ex-officio Political Agent for Pudukkottai. The administration of the State, under the Raja, is entrusted to a State Council of three members, a Superintendent (Mr. Thomas Austin, I.C.S.), Dewan, and Councillor. The various departments are constituted on the British India model. The principal food crop is rice. The forests, which cover about one-seventh of the State, contain only small timber. There are no large industries. The State is well provided with roads, but Pudukkottai is the only municipal town in the State.

Political Agent: C. G. Austin, I.C.S.

Banganapalle.—This is a small State in two detached portions which in the eighteenth century passed from Hyderabad to Mysore and back again to Hyderabad. The control over it

was ceded to the Madras Government by the Nizam in 1800. The present ruler is Nawab Meer Ghulam Ali Khan Bahadur. The chief food grains grown are wheat and cholam. Roads have recently been constructed and the capital Baganapalle, is opened up with broad thoroughfares. The Nawab pays no tribute and maintains no military force. Sericulture, lac cultivation, and weaving industries have lately been started in the State.

Political Agent: C. F. Brackenbury, I.C.S.

Sandur.—This is a small State almost surrounded by the District of Bellary the Collector of which is the Political Agent. Its early history dates from 1728 when it was first seized by an ancestor of the present Raja, a Maratha named Sidhoji Rao. It subsequently became a vassal to the Peshwa, after whose downfall a formal title for the State was granted by the Madras Government to one Siva Rao. The present ruler is H. H. Raja Srimant Venkata Rao, Rao Saheb Ghorpade, Mamulkat Madar, Senapathi, who was born in 1892. The State was administered by the Raja and the Dewan (M. R. R. A. Subraya Modliar Avergal) but the Raja was temporarily removed from powers and the administration of the State was assumed by the Government of Madras, with effect from 1st October 1918. The Raja pays no tribute and maintains no military force. The most important staple crop is cholam. Teak and sandal wood are found in small quantities in the forests.

The minerals of the State possess unusual interest. The hematites found in it are probably the richest ore in India. An outcrop near the southern boundary forms the crest of a ridge 150 feet in height, which apparently consists entirely of pure steel grey crystalline hematite (specular iron) of intense hardness. Some of the softer ores used to be smelted, but the industry has been killed by the cheaper English iron. Manganese deposits have also been found in three places, and during 1911 to 1914 over 2,23,000 tons of manganese ore were transported by one company.

Ag. Political Agent: J. I. Smith, I.C.S.

UNDER THE GOVERNMENT OF BOMBAY.

More than a half of the total number of the very various units counted as Native States in India are under the Government of Bombay. The characteristic feature of the Bombay States is the great number of petty principalities; the peninsula of Kathiawar alone contains nearly two hundred separate States. The recognition of these innumerable jurisdictions is due to the circumstance that the early Bombay administrators were induced to treat the *de facto* exercise of civil and criminal jurisdiction by a landholder as carrying with it a quasi-sovereign status. As the rule of succession by primogeniture applies only to the larger principalities, the minor states are continually suffering disintegration. In Bombay, as in Central India, there are to be found everywhere the traces of disintegration and disorder left by the eighteenth century. In no part of

India is there a greater variety of principalities. The bulk of them are of modern origin, the majority having been founded by Marathas in the general scramble for power in the middle of the eighteenth century, but several Rajput houses date from earlier times. Interesting traces of ancient history are to be found at Sachin, Janjira and Jafarabad, where chiefs of a foreign ancestry, descended from Abyssinian admirals of the Deccan fleets, still remain. A few aboriginal chiefs, Bilis or Kolis, exercise an enfeebled authority in the Dangs and the hilly country that fringes the Mahi and the Narbada rivers.

The control of the Bombay Government is exercised through Political Agents, whose positions and duties vary greatly. In some of the more important States their functions are confined to the giving of advice and the

exercise of a general surveillance; in other cases they are invested with an actual share in the administration; while States whose rulers are minors—and the number of these is always large—are directly managed by Government officers. Some of the States are subordinate to other States, and not in direct relations with the British Government; in these cases the status of the feudatories is usually guaranteed by Government. The powers of the chiefs are regulated by treaty or custom, and range downwards to a mere right to collect revenue in a share of a village, without criminal or civil jurisdiction, as in the case of the petty chiefs of Kathiawar.

The Native States in the Bombay Presidency number 377. Area 65,761 square miles. Population (1911) 7,411,675. They are divided for administrative purposes into the following agencies:—Bijapur Agency, 2 states; Cutch Agency, 1 state; Dharwar Agency, 1 state (Savanur); Kaira Agency, 1 state (Cambay); Kathiawar Agency, 187 states (principal states, Bhavnagar, Dhrangadhra, Gondal, Junagadh, Nawanagar); West Khandesh Agency, 20 states; Kolaba Agency, 1 state (Janjira); Kolhapur Agency, 9 states (principal state Kolhapur, with 9 feudatory states); Mahi Kantha Agency, 51 states (principal state, Idar); Nasik Agency, 1 state (Surgana); Palanpur Agency, 17 states (principal state, Palanpur); Poona Agency, 1 state (Bhor); Rewa Kantha Agency, 62 states (principal State, Rajpipla); Satara Agency, 2 states; Savantvadi Agency, 1 state; Sholapur Agency, 1 state; Sukkur Agency, 1 state (Khairpur); Surat Agency, 17 states; Thana Agency, 1 state (Janhar). The table below gives details of the area, etc., of the more important States:—

State.	Area in sq. miles.	Popula- tion.	Approx. Revenue in lakhs of rupees.
Bhavnagar ..	2,860	441,367	47
Cutch ..	7,616	513,429	25
Dhrangadhra ..	1,156	79,142	12
Gondal ..	1,024	161,916	15
Idar ..	1,669	202,811	6
Junagadh ..	3,284	434,222	26
Khairpur ..	6,050	223,788	15
Kolhapur ..	3,165	833,441	57
Navanagar ..	3,791	349,400	22
Palanpur ..	1,750	226,250	5
Rajpipla ..	1,517	161,588	9

Bijapur Agency.—This comprises the Satara Jaghir of Jath (980.8 square miles in area). On the annexation of Satara, in 1849, Jath and Daffapur like other Satara Jaghirs, became feudatories of the British Government. The latter has more than once interfered to adjust the pecuniary affairs of the Jath Jaghir and in consequence of numerous acts of oppression on the part of the then ruler was compelled to assume direct management from 1874 to 1885. The small Estate of Daffapur with an area of 96.8 square miles lapsed to the Jath Jaghir on the demise of its last ruler Ranibai Saheb Daffe in January 1917. The Chief of Jath who belongs to the Maratha caste, is a Treaty Chief and ranks as a first class Sardar.

He holds a sanad of adoption, and the succession follows the rule of primogeniture. The gross revenue of the State is about 3 lakhs chiefly derived from land revenue. The Jath State pays to the British Government Rs. 6,400 per annum in lieu of horse contingent and Rs. 4,840 on account of Sardeshmukhi rights.

Political Agent.—A. Master, Collector of Bijapur.

Cutch.—The State is bounded on the north and north-west by Sind, on the east by the Palanpur Agency, on the south by the Peninsula of Kathiawar and the Gulf of Cutch and the south-west by the Indian Ocean. Its area, exclusive of the great salt marsh called the Rann of Cutch, is 7,616 square miles. The capital is Bhuj, where the ruling Chief (the Maharao His Highness Maha Rao Sri Khengarji Savai Bahadur, G.C.S.I., G.C.I.E., resides. From its isolated position, the special character of its people, their peculiar dialect, and their strong feeling of personal loyalty to their ruler, the peninsula of Cutch has more of the elements of a distinct nationality than any other of the dependencies of Bombay. The earliest historic notices of the State occur in the Greek writers. Its modern history dates from its conquest by the Sind tribe of Samma Rajputs in the fourteenth century. The section of the Sammas forming the ruling family in Cutch were known as the Jadejas or 'children of Jada.' The British made a treaty with the State in 1815. There is a fair proportion of good arable soil in Cutch, and wheat, barley and cotton are cultivated. Both iron and coal are found but are not worked. Cutch is noted for its beautiful embroidery and silverwork and its manufactures of silk and cotton are of some importance. Trade is chiefly carried by sea. The ruling chief is the supreme authority. A few of the Bhayats are invested with jurisdictional powers in varying degrees in their own Estates and over their own ryots. A notable fact in connection with the administration of the Cutch State is the number and position of the Bhayat. These are Rajput nobles forming the brotherhood of the Rao. They were granted a share in the territories of the ruling chief as provision for their maintenance and are bound to furnish troops on an emergency. The number of these chiefs is 137, and the total number of the Jadeja tribe in Cutch is about 16,000. The British military force having been withdrawn from Bhuj, the State now pays Rs. 82,257 annually as an Anjar equivalent to the British Government. The military force consists of about 1,000 in addition to which, there are some irregular infantry, and the Bhayats could furnish on requisition a mixed force of four thousand.

Political Agent: Lt.-Col. R. S. Pottinger.

Dharwar Agency.—This comprises only the small State of Savanur. The founder of the reigning family who are Mahomedans of Pathan origin was a Jagirdar of Emperor Aurangzebe. At the close of the last Maratha War the Nawab of Savanur whose conduct had been exceptionally loyal was confirmed in his possessions by the British Government. The State pays no tribute. The principal crops are jwari and cotton. The area is 70 square miles and population 17,909. The revenue is about one lakh.

The present chief is Captain Abdul Majidkhan Dilerjang Bahadur.

Political Agent: A. E. L. Emanuel, I.C.S.

Kaira Agency.—This includes only the State of Cambay at the head of the Gulf of the same name. Cambay was formerly one of the chief ports of India and of the Anhilvada Kingdom. At the end of the thirteenth century it is said to have been one of the richest towns in India; at the beginning of the sixteenth century also it formed one of the chief centres of commerce in Western India. Factories were established there by the English and the Dutch. It was established a distinct State about 1730, the founder of the present family of Chiefs being the last but one of the Mahomedan Governors of Gujarat. The present Nawab is His Highness Mirza Hussein Yawar Khan who is a Shiah Mogul of the Najumisani family of Persia, and was born on the 16th May, 1911. His father, the late Nawab Jaffar Ali Khan, died on 21st January, 1915, leaving him a minor. The State is therefore under British Administration. The State pays a tribute of Rs. 21,924 to the British Government. Wheat and cotton are the principal crops. There is a broad gauge line from Cambay to Petlad, connecting with the B. B. & C. I. Railway at Anand. Cambay is a first class State having full jurisdiction. Revenue is about six lakhs. The area of the State is 350 square miles, population 72,656.

Political Agent: J. C. Ker, I.C.S.

Kathiawar Agency.—Kathiawar is the peninsula or western portion of the Province of Gujarat, Bombay. Its extreme length is about 220 miles and its greatest breadth about 165 miles, the area being 23,445 square miles. Of this total about 20,882 square miles with a population of 2,496,057 is the territory forming the Political Agency subordinate to the Government of Bombay, established in 1822, having under its control nearly 200 separate States whose chiefs divided amongst themselves the greater portion of the peninsula. The Kathiawar Agency is divided for administrative purposes into four prants or divisions—Jhalawar, Halar, Sorath and Gohelwar—and the States have since 1863 been arranged in seven classes. Since 1822 political authority in Kathiawar has been vested in the Political Agent subordinate to the Government of Bombay. In 1902 the designations of the Political Agent and his Assistants were changed to those of Agent to the Governor and Political Agents of the prants. Before 1863, except for the criminal court of the Agent to the Governor, established in 1831, to aid the Darbars of the several States in the trial of heinous crimes, interference with the judicial administration of the territories was diplomatic, not magisterial; and the criminal jurisdiction of the first and second-class chiefs alone was defined. In 1863, however, the country underwent an important change. The jurisdiction of all the chiefs was classified and defined: that of chiefs of the first and second classes was made plenary; that of lesser chiefs was graded in a diminishing scale. The four Political Agents of the prants resident in the four divisions of Kathiawar, now exercise residuary jurisdiction with large civil and criminal powers. Each Political Agent of a prant has a deputy, who resides at the headquarters of the prant or division, and

exercises subordinate civil and criminal powers. Serious criminal cases are committed by the deputies to the court of the Agent to the Governor, to whom also civil and criminal appeals lie. The Agent to the Governor is aided in this work by an officer known as the Political Agent and Judicial Assistant, who is usually a member of the Indian Civil Service. Appeals from his decisions lie direct to the Governor of Bombay in Council in his executive capacity. Two Deputy Assistants also help the Agent.

Agent to the Governor in Kathiawar: Evan Maconochie, C.S.I., I.C.S.

Bhavnagar.—This State lies at the head and west side of the Gulf of Cambay. The Gohe Rajputs, to which tribe the Chief of Bhavnagar belongs, are said to have settled in the country about the year 1260, under Sajakji from whose three sons—Ranoji, Saranji and Shahji—are descended respectively the chiefs of Bhavnagar, Lathi and Palitana. An intimate connexion was formed between the Bombay Government and Bhavnagar in the eighteenth century when the chief of that State took pains to destroy the pirates which infested the neighbouring seas. The State was split up when Gujarat and Kathiawar were divided between the Peshwa and the Gaekwar; but the various claims over Bhavnagar were consolidated in the hands of the British Government in 1807. The State pays an annual tribute of Rs. 1,28,060 to the British Government, Rs. 3,581-8-0 as Peshkash to Baroda, and Rs. 22,858 as Zorlati to Junagadh. During the minority of the present heir to His Highness the Maharaja who died in 1911 the administration of the State has been entrusted to an Administrator, the present occupant of the post being Sir Prabhashankar D. Pattani, K.C.I.E., a former Dewan of the State and until recently a member of the India Council. One noteworthy feature in the administration is the complete separation of judicial from executive functions and the decentralisation of authority is another. The authority and powers of all the Heads of Departments have been clearly defined, and each within his own sphere is independent of the others, being directly responsible to the Dewan.

The chief products of the State are grain, cotton and salt. The chief manufactures are oil, copper and brass vessels and cloth. The Bhavnagar State Railway is 205 miles in length and the management of it undertakes also the working of the Dhrangadhra State Railway for a length of 40 miles. The capital of the State is the town and port of Bhavnagar, which has a good and safe harbour for shipping and carries on an extensive trade as one of the principal markets and harbours of export for cotton in Kathiawar. Bhavnagar supports 300 Imperial Service Lancers and 282 Infantry of Armed Police.

Dhrangadhra State is an uneven tract of land (intersected by small streams) which consists of hilly and rocky ground where stone is quarried. The chief of Dhrangadhra belongs to the Jhala tribe, originally a subdivision of the Makvana family. This tribe is of great antiquity, and is said to have entered Kathiawar from the north, establishing itself first at Patri in the Ahmedabad District, then moving to Halvad and finally settling in it.

present seat. The greater part of this territory was probably annexed at one time by the Mahomedan rulers of Gujarat. Subsequently, during the reign of the Emperor Aurangzebe (1658-1707), the sub-division of Halvad, then called Muhammadnagar, was restored to the Jhala family. The petty States of Limbdi, Wadhwan, Chuda, Sayla, and Than-Lakhtar in Kathiawar are offshoots from Dhrangadhra; His Highness the Maharana Shri Sir Ghanshyamsinhji, K.C.S.I., Maharaja Raj Saheb, is the ruling chief, who is the head of the Jhala Rajput family. The State pays a tribute of Rs. 40,671 to the British Government, and Rs. 4,006 to Junagadh State. The administration is conducted under the Maharaja's directions by the Dewan Rana Shri Mansinhji S. Jhala, C.I.E. The principal crops are cotton and grain. The Capital town is Dhrangadhra, a fortified town, 75 miles west of Ahmedabad.

Dhrangadhra State owns its railway from Wadhwan Junction to Halvad, a distance of 40 miles which is worked by the Bhavnagar State Railway on certain conditions.

Gondal State.—The Chief of Gondal is a Rajput of the Jadeja stock with the title of H. H. Thakore Sahib, the present Chief being H. H. Shri Bhagvat Sinhji, G.C.I.E. The early founder of the State, Kumbhoji I., had a modest estate of 20 villages. Kumbhoji II., the most powerful Chief of the House, widened the territories to almost their present limits by conquest; but it was left to the present ruler to develop its resources to the utmost, and in the words of Lord Reay, Governor of Bombay, by its "importance and advanced administration" to get it recognised as a First Class State. The State pays a tribute of Rs. 1,10,721. The chief products are cotton and grain and the chief manufactures are cotton and woollen fabrics and gold embroidery. Gondal has always been pre-eminent amongst the States of its class for the vigour with which public works have been prosecuted, and was one of the earliest pioneers of railway enterprise in Kathiawar, having initiated the Dhasa-Dhoraji line: it subsequently built other lines in partnership with other Native States in Kathiawar. There are no export and import dues, the people being free from taxes and dues. Comparatively speaking Gondal stands first in Kathiawar in respect of the spread of education. Compulsory female education in the State has been recently ordered by His Highness. Rs. 13 lakhs has been spent on irrigation tanks and canals and water supply to the town of Gondal. The Capital is Gondal, a fortified town on the line between Rajkot and Jetalsar.

Junagadh State.—This State has an area of 3,283 square miles and an average revenue of about 50 lakhs and is bounded on the north by the Bardas and Halar and on the west and south by the Arabian Sea. The river Saraswati, famous in the sacred annals of the Hindus, passes through the State. A sparsely wooded tract called the Gir, is contained in the State and is well known as the last haunt in India of the lion. Until 1472, when it was conquered by Sultan Mahmud Begra of Ahmedabad, Junagadh was a Rajput State, ruled by Chiefs of the Chudasama tribe. During the reign of the Emperor Akbar it became a

dependency of Delhi, under the immediate authority of the Mughal Viceroy of Gujarat. About 1735, when the representative of the Mughals had lost his authority in Gujarat, Sher Khan Babi, a soldier of fortune, expelled the Mughal Governor, and established his own rule. The ruler of Junagadh first entered into engagements with the British Government in 1807. The Chief bears the title of Nawab, the present Nawab being tenth in succession from the founder of the family. He is His Highness Mahabat Khan, who was born in 1900 and succeeded in 1911. The agricultural products are cotton, shipped in considerable quantities from Veraval to Bombay, wheat and other grains. The coast line is well supplied with fair weather harbours. The State pays a tribute of Rs. 65,604 to the Gaekwar of Baroda and the British Government, but the Nawab receives contributions, called *zotabi*, amounting to Rs. 92,421 from a number of chiefs in Kathiawar—a relic of the days of Mahomedan supremacy. The State maintains 100 Imperial Service Lancers. The Capital is Junagadh, situated under the Girnar and Datar hills, which is one of the most picturesque towns in India, while in antiquity and historical interest it yields to none. The Uparkot, or old citadel, contains interesting Buddhist caves, and the whole of the ditch and neighbourhood is honeycombed with caves or their remains. There are a number of fine modern buildings in the town.

Administrator: H. D. Rendall, I.C.S.

Navanagar State, on the southern shore of the Gulf of Cutch, has an area of 3,791 square miles. The Maharaja of Navanagar is a Jadeja Rajput by caste, and belongs to the same family as the Rao of Cutch. The Jadejas originally entered Kathiawar from Cutch, and dispossessed the ancient family of Jethwas (probably a branch of Jats) then established at Ghumli. The town of Navanagar was founded in 1540. The present Jam Sahib is the well-known cricketer, H. H. Jam Sahib Shri Ranjitsinhji Vibhaji, who was born in 1872 and succeeded in 1907. The principal products are grain and cotton, shipped from the ports of the State. A small pearl fishery lies off the coast. The State pays a tribute of Rs. 1,20,093 per annum jointly to the British Government, the Gaekwar of Baroda and the Nawab of Junagadh. The State maintains a squadron of Imperial Service Lancers. The Capital is Navanagar (or Jamnagar) a flourishing place, nearly 4 miles in circuit, situated 5 miles east of the port of Bedi. Population, 349,400. Revenue nearly Rs. 40 lakhs.

Dewan: K. B. Merwanji Pestonji.

Kolaba Agency.—This Agency includes the State of Janjira in the Konkan, a country covered with spurs and hill ranges and much intersected by creeks and backwaters. The ruling family is said to be descended from an Abyssinian in the service of one of the Nizam Shahi Kings of Ahmednagar at the end of the fifteenth century. The most noticeable point in its history is the successful resistance that it alone, of all the states of Western India, made against the determined attacks of the Marathas. The British on succeeding the Marathas as masters of the Konkan refrained

from interfering in the internal administration of the State. The chief is a Sunni Mahomedan, by race a Sidi or Abyssinian, with a title of Nawab. He has a sanad guaranteeing succession according to Mahomedan law and pays no tribute. Till 1868 the State enjoyed singular independence, there being no Political Agent, and no interference whatever in its internal affairs. About that year the maladministration of the chief, especially in matters of police and criminal justice, became flagrant; those branches of administration were in consequence taken out of his hands and vested in a Political Agent. The present ruler is H. H. Nawab Sidi Sir Ahmed Khan, G.C.L.H., who was born in 1862. The heir-apparent is Sidi Mahammad Khan, born on the 7th March 1914. The area of the State is 377 square miles, and the population 101,120. The average revenue is 6 lakhs. The State maintains an irregular military force of 246. The capital is Janjira, 44 miles south of Bombay Island. The Chief exercises full powers in Criminal, Civil and Revenue matters of the State including Jafarabad, a dependency of the Janjira State in Kathiawar. He is entitled to a dynastic salute of 11 guns. In recognition of services rendered in connection with the war his salute was raised on the 1st January 1918 to 13 guns personal.

Kolhapur Agency.—Kolhapur is a State with an area of 3,217 square miles and population of 833,441. Subordinate to Kolhapur are nine feudatories, of which the following five are important: Vishalgarh, Bavda, Kagal (senior), Kapsi and Ichalkaranji. The present ruling chief Col. Sir Shahu Chhatrapati Maharaja,

G.C.S.I.; G.C.I.E.; G.C.V.O.; traces his descent from a younger son of Shivaji, founder of the Maratha power. The prevalence of piracy from the Kolhapur port of Malvan compelled the Bombay Government to send expeditions against Kolhapur in 1765, and again in 1792; when the Raja agreed to give compensation for the losses which British merchants had sustained since 1785, and to permit the establishment of factories at Malvan and Kolhapur. Internal dissensions and wars with neighbouring States gradually weakened the power of Kolhapur. In 1812 a treaty was concluded with the British Government, by which, in return for the cession of certain ports, the Kolhapur Raja was guaranteed against the attacks of foreign powers; while on his part he engaged to abstain from hostilities with other States, and to refer all disputes to the arbitration of the British Government. The principal articles of production are rice, jawar and sugar-cane and the manufactures are coarse cotton and woollen cloths, pottery and hardware. The State pays no tribute, and supports a military force of 690. The nine feudatory estates are administered by their holders, except in the case of two whose holders are minors. Kolhapur proper is divided into five pethas or talukas and four mahals and is managed by the Maharaja, who has full powers of life and death. The Southern Mahratta Railway passes through the State and is connected with Kolhapur City by a line which is the property of the State.

*Resident and Senior Political Agent for Kolhapur and the Southern Mahratta Country—*Lt.-Col. F. W. Wodehouse, C.I.E.

Southern Maratha Country States.—The Agency consists of the following eight States:—

Name of State.	Area in square miles.	Population.	Tribute to British Government.	Average revenue.
			Rs.	Rs.
Sangli	1,112	227,146	1,35,000	10,75,756
Miraj (Senior)	339	80,281	12,557	3,12,980
Miraj (Junior)	210	36,490	7,388	2,55,263
Kurundwad (Senior)	185	38,375	....	1,54,369
Kurundwad (Junior)	114	34,084	9,618	1,73,669
Jamkhandi	524	100,304	20,515	9,41,105
Mudhol	368	62,831	2,671	3,52,916
Ramdrug	169	36,610	....	1,50,729
Total ..	3,021	616,121	1,87,749	34,16,787

Mahi Kantha.—This group of States has a total area of 3,124 square miles and a population of 412,631 including that of Idar which is 202,811. The revenue is about 14 lakhs. The Agency consists of the first class State of Idar and 51 small States. The Native State of Idar covers more than half the territory. It has an area of 1,669 square miles and an average revenue of Rs. 10,01,725; eleven other States are of some importance; and the remainder are estates belonging to Rajput or Koli Thakurs, once the lawless feudatories of Baroda, and still requiring the anxious supervision of the Poli-

tical Officer. H. H. Major-General Sir Partab Singh, a Rajput of the Rathor Clan, having been appointed regent of the State of Jodhpur, resigned the gadi of Idar in June 1911 and was succeeded by his adopted son Daulatsinhji, who is aged 39. His Highness had been on active service. Many relatives of the Maharaja and feudal chiefs whose ancestors helped to secure the country for the present dynasty, now enjoy large estates on service tenures, and there are numerous petty chiefs or *bhumias* who have held considerable estates from the time of the Raos of Idar, or earlier, and are under no

obligation of service. The revenues of the State are shared by the Maharaja with these feudal chiefs. The Maharaja receives Rs. 52,427 annually on account of Khichdi and other Raj Haks from its subordinate Sardars, the tributary Talukas of the Mahi Kantha Agency and others, and pays Rs. 30,340 as tribute to the Gaekwar of Baroda through the British Government. The subordinate Sardars of Idar, known locally as pattawats, hold their estates on condition of military service, the quota being three horsemen for every 1,000 Rupees of Revenue; but for many years this service has not been exacted and no military force is maintained at present. The second class States are Polo and Danta. The success of minor Rao Hamirsinghji has been recognised by Government to the Chiefship of the former, while the Ruler of the latter is Maharana Hamirsinghji.

Political Agent—Lt.-Col. W. Beale.

Nasik Agency.—This consists of one State Surgana, lying in the north-west corner of the Nasik District. Surgana has an area of 360 square miles and a population of 15,180. The ruling chief is Prataprav Shankarrao Deshmukh, who is descended from a Maratha Pawar family. He rules the State subject to the orders of the Collector of Nasik. The revenue of the State is about Rs. 33,000.

Palanpur Agency.—This group of States in Gujarat comprises two first class States, Palanpur and Radhanpur, and a few minor States and petty talukas. Its total area is 6,393 square miles and the population is 515,092. The gross revenue is about 14½ lakhs. The territory included in the Agency has, like the more central parts of Gujarat, passed during historical times under the sway of the different Rajput dynasties of Anhilvada, the early Khilji and Tughlak Shahi dynasties of Delhi, the Ahmedabad Sultans, the Mughal Emperors, the Mahrattas, and lastly the British. The State from which the Agency takes its name is under the rule of H. H. Taley Muhammad Khan, who is entitled Nawab and Dewan of Palanpur. He is descended from the Lohanis, an Afghan tribe who appeared in Gujarat in the fourteenth century. The connection of the British Government with the State dates from 1819 in which year the chief was murdered by a body of nobles. Two high roads from Ahmedabad pass through the State and a considerable trade in cotton, cloth, grain, sugar and rice is carried on. The State maintains a constabulary force of 600 and pays tribute of Rs. 38,000 to the Gaekwar of Baroda. The capital is Palanpur, situated at the junction of the Palanpur-Deesa Branch of the B. B. & C. I. Railway. It is a very old settlement of which mention was made in the eighth century.

Political Agent—Lt.-Col. J. W. B. Merewether.

Radhanpur is a State, with an area of 1,150 square miles, which is held by a branch of the Babi family, who since the reign of Humayun have always been prominent in the annals of Gujarat. The present chief is H. H. Jalal-ud-din Khanji, the Nawab of Radhanpur. He has powers to try his own subjects even for capital offences without permission from the Political Agent. The State maintains a military force of 200. The principal products

are cotton; wheat and grain. The capital is Radhanpur town, a considerable trade centre for Northern Gujarat and Cutch.

Rewa Kantha Agency.—This Agency, with an area of 4,956 square miles and a population of 665,099, comprises 61 States, of which Rajpipla is a first class State, 5 are second class, one is third class and the rest are either petty States or talukas. Among those petty States are Sanjeli in the north, Bhadarva and Umeta in the west, Narukot in the south-east, and two groups of Mehwas. The 26 Sankheda Mehwas petty estates lie on the right bank of the Narbada, while the 24 Pandu Mehwas petty estates including Dodka, Anghad and Raika, which together form the Dodka Mehwas are situated on the border of the Mahi.

The following are the statistics of area and population for the principal States:—

State.	Area in square miles.	Population.
Balasinor	189	40,563
Bariya	813	115,350
Chhota Udaipur	873	103,639
Lunavada	388	75,998
Narukot (Jambhughoda) ..	143	8,485
Rajpipla	1,517	161,588
Sunth	394	59,350
Other Jurisdictional States, Civil Stations and Thana Circles	639	100,126

Under the first Anhilvada dynasty (746-961), almost all the Rewa Kantha lands except Champaner were under the government of the Bariyas, that is, Koli and Bhil chiefs. In the eleventh, twelfth and thirteenth centuries chiefs of Rajput or part Rajput blood, driven south and east by the pressure of Muhammadan invasions, took the place of the Koli and Bhil leaders. The first of the present States to be established was the house of the Raja of Rajpipla.

Political Agent—H. B. Clayton, I.C.S.

Rajpipla.—This State lies to the south of the Narbada. It has an area of 1,517 square miles, and largely consists of the Rajpipla Hills which form the watershed between the Narbada and Tapi rivers. The family of the Raja of Rajpipla, H. H. Maharana Shri Vijayasinji is said to derive its origin from a Rajput of the Gohel clan. The State pays an annual sum of Rs. 50,000 on account of Ghasdana to the Gaekwar of Baroda. Cotton is the most important crop in the State. In the south there are valuable teak forests. The capital is Nandod, which is connected with Anklesvar by railway built by the State.

Satara Jagirs.—Under this heading are grouped the following six States:—

State.	Area in sq. miles.	Popu- lation.	Revenue in lakhs.
Aundh	501	38,995	3
Phaltan	397	55,996	2
Bhor	925	144,601	5
Akalkot	498	89,082	4
Jath	884	69,810	2
Daphlapur	96	8,833	2

These were formerly feudatory to the Raja of Satara. In 1849 five of them were placed under the Collector of Satara, and Akalkot under the Collector of Sholapur. Subsequently, the Jagir of Bhor was transferred to the Collector of Poona and Jath and Daphlapur to the Southern Mahratta country. The last two are now under the Collector of Bijapur. The ruling chiefs are as follows:—

State.	Ruling Chiefs,	Tribute to British Government
		Rs.
Aundh ..	Bhavanrav Shrinivasrao <i>alias</i> Baba Saheb, Pant Pratinidhi.	...
Phaltan ..	Mudhojirav Janrav Nimbalkar	9,600
Bhor ..	H. H. Shankarrav Chimmaji, Pant Sachiv	4,684
Akalkot ..	Fatehsinh Shahai Raje Bhonsle <i>alias</i> Bapu Saheb	14,592
Jath ..	Ramrav Amritrav <i>alias</i> Aba Saheb Daphle	6,400
Daphlapur ..	Rani Bai Saheb Daphle, widow of Ramchandrav Venkatrav Chavan Daphle.	....

Savantwadi.—This State has an area of 925 square miles and population of 217,240. The average revenue is 5½ lakhs. It lies to the north of the Portuguese territory of Goa, the general aspect of the country being extremely picturesque. Early inscriptions take the history of the State back to the sixth century. So late as the nineteenth century the ports on this coast swarmed with pirates and the country was very much disturbed. The present chief is Khem Savant V, *alias* Bapu Saheb Bhonsle. Rice is the principal crop of the State, and it is rich in valuable teak. The sturdy Marathas of the State are favourite troops for the Indian Army and supply much of the immigrant labour in the adjacent British districts. The Capital is Savantwadi, also called Sundar Vadi, or simply Vadi.

Sholapur Agency.—This contains the State of Akalkot which forms part of the tableland of the Deccan. It has an area of 498 square miles and a population of 89,082. In the beginning of the eighteenth century the Akalkot territory, which had formerly been part of the Mussulman kingdom of Ahmednagar was granted by the Raja of Satara to a Maratha Sardar, the ancestor of the present chief, subject to the supply of a contingent of horse. In 1849 after the annexation of Satara, the Akalkot Chief became a feudatory of the British Government.

Baria.—The State has an area of 813 square miles and is situated in the heart of the Panchmahals district. The Capital Devgad Baria is reached by road from Piplod station on the B. B. & C. I. Railway, at a distance

of eight miles. The average revenue of the State is about 8 lakhs. The State enjoys plenary powers and pays no tribute to the British Government or any other State. The Ruler Captain Maharaoi Shree Ranjitsinhji enjoys a salute of nine guns. He served in France and Flanders in the war. The staple crop is maize. The forests are rich in teak wood and all sorts of jungle produce. There is a flourishing glass industry within the State. There is a large scope for forest industries.

The Sukkur Agency.—This consists of the Khairpur State, a great alluvial plain in Sind. It has an area of 6,050 square miles and a population of 223,788, and revenue of over 20 lakhs, 59 thousands. The present chief, H. H. Mir Sir Imam Buksh Khan Talpur, G.C.I.E., belongs to a Baloch family called Talpur. Previous to the accession of this family on the fall of the Kalhora dynasty of Sind in 1783, the history of Khairpur belongs to the general history of Sind. In that year Mir Fateh Ali Khan Talpur established himself as Rais or ruler of Sind; and subsequently his nephew, Mir Sohrab Khan Talpur, founded the Khairpur branch of the Talpur family. In 1832 the individuality of the Khairpur State, as separate from the other Talpur Mirs in Sind, was recognised by the British Government in a treaty, under which the use of the river Indus and the roads of Sind were secured to the British. The chief products of the State are oil-seeds, ghee, hides, tobacco, fuller's earth, carbonate of soda, cotton, wool and grain. The manufactures comprise cotton fabrics and various kinds of silverware and metal work.

There is an industrial school at the capital where lacquer work, carpets, pottery, etc., are produced. The Railway from Hyderabad to Rohri runs through the whole length of the State. The rule of the Mir is patriarchal, but many changes have been made in recent years introducing greater regularity of procedure into

the administration. The Wazir, an officer sent from British service, conducts the administration under the Mir. The State supports a military force of 564 including an Imperial Service Camel and Baggage Corps which is 139 strong and served at the Front.

Political Agent : The Collector of Sukkur.

Surat Agency.—This is a small group of three second class States under the superintendence of the Collector of Surat.

State.	Ruling Chiefs.	Area in sq. miles.	Population.
Dharampur ..	Maharana Shri Mohandevji Narayandevji.	704	114,995
Bansda ..	Maharaval Shri Indrasinhji Pratapsinhji	215	44,594
Sachin ..	His Highness Nawab Sidi Ibrahim Muhammad Yakut Khan Mubazarat Daula Nasrat Jung Bahadur.	49	18,930

The joint revenue of these states is 16½ lakhs. Tribute is paid to the British Government of Rs. 9,154. There is also attached to this Agency a tract of country known as the Dangs, which has an area of 999 square miles and a population of 29,353 and a revenue of Rs. 30,000. The country is divided into 14 Dangs or States of very unequal area, each under the purely nominal rule of a Bhil Chief with the title of Raja, Naik, Pradhan or Povar.

Thana Agency.—This includes the State of Jawhar, in the Thana District, on a plateau above the Konkan plain. It has an area of

310 square miles and a population of 53,489 and revenue of 2½ lakhs. Up to 1294, the period of the first Mahomedan invasion of the Deccan, Jawhar was held by a Varli, not a Koli chief. The first Koli chief, obtained his footing in Jawhar by a device similar to that of Dido, when she asked for and received as much land as the hide of a bull would cover. The Koli chief cut a hide into strips, and thus enclosed the territory of the State. The present chief is Raja Vikramshah Patangshah, who administers the State, assisted by a Karbhari under the supervision of the Collector of Thana, who is Political Agent of the State.

UNDER THE GOVERNMENT OF BENGAL.

Cooch Behar.—This State, which at one time comprised almost the whole of the Northern Bengal, Assam and a part of Bhutan now known as the Duars, is a low-lying plain in North Bengal. It has an area of 1,307 square miles, a population of 593,052 and revenue of nearly 30 lakhs, which will be considerably enhanced this year after the completion of the settlement operations. The ruling chief is H. H. Maharaja Jitendra Narayan Bhup Bahadur who married Rani Indira Debi, eldest daughter of H. H. Maharaja Sayaji Rao Gaekwar of Baroda in 1913 and succeeded his brother Maharaja Raj Rajendra Narayan in the same year. A daughter was born to His Highness in October 1914 and a son and heir in December 1915. His family is according to some ethnologists of either Dravidian or Mongolian origin or a mixture of both types, but according to others of Kshatriya origin. H. H. administers the State with the assistance of the State Council of which he is President. Cooch Behar once formed part of the famous kingdom of Kamup. British connection with it began in 1772 when owing to inroads of the Bhutes, the assistance of the East India Company was invited. The chief products of the State are rice, jute, mustard seed and tobacco. The capital is Cooch Behar, which is reached by the Cooch Behar State Railway, a branch from the Eastern Bengal State Railway System.

Hill Tippera.—This State lies to the east of the district of Tippera and consists largely of hills covered with dense jungles. It has an area of 4,086 square miles and a population of 229,613. The revenue from the State is about 11 lakhs and from the Zemindari in

British territory a slightly smaller sum. The present ruler is Maharaja Birendra Kishore Deb Barman Manikya Bahadur, who is a Kshatriya by caste and comes of the Lunar race and is entitled to a salute of 13 guns. The military prestige of the Tippera Rajas dates back to the fifteenth century and a mythical account of the State takes the history to an even earlier date. Both as regards its constitution and its relations with the British Government, the State differs alike from the large Native States of India, and from those which are classed as tributary. Besides being the ruler of Hill Tippera, the Maharaja also holds a large landed property situated in the plains of the Districts of Tippera, Naokhali and Sylhet. This estate covers an area of 600 square miles, and is held to form with the State an indivisible Raj. Disputes as to the right of succession have occurred on the occasion of almost every vacancy in the Raj producing in times gone by disturbances and domestic wars, and exposing the inhabitants of the hills to serious disorders and attacks from the Kukis, who were always called in as auxiliaries by one or other of the contending parties. The principles which govern succession to the State have recently, however, been embodied in a *sanad* which was drawn up in 1904. The chief products of the State are rice, cotton, *til* and forest produce of various kinds, the traffic being carried chiefly by water. The administration is conducted by the Chief Dewan at Agartala, the capital, assisted by two assistants.

Political Agent : J. Younie, I.C.S.

UNDER THE GOVERNMENT OF BIHAR AND ORISSA.

Under this Government there are the Chota Nagpur political States of Kharsawan and Seraikela, and the Orissa feudatory States, 24 in number. The total area is 28,648 square miles, and the total population 3,942,972. The revenue is about 70 lakhs. The inhabitants are hill-men of Kolarian or Dravidian origin, and their condition is still very primitive. The chief of **Kharsawan** belongs to a junior branch of the Porahat Raja's family. The State first came under the notice of the British in 1793, when, in consequences of disturbances on the frontier of the old Jungle Mahals, the Thakur of Kharsawan and the Kunwar of Seraikela were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present sanad was granted in 1899. He exercises all administrative powers, executive and judicial, subject to the control of the Deputy Commissioner of Singhbhum and the Commissioner of Chota Nagpur. The Bengal Nagpur Railway runs through a part of the State. The adjoining State of Seraikela is held by the elder branch of the Porahat Raja's family.

Orissa Feudatory States.—This group of 24 dependent territories is situated between the Mahanadi Delta and the Central Provinces, and forms the mountainous background of Orissa. The names of the individual States are Athgarh, Talcher, Mayurbhanj, Nilgiri, Keonjhar, Pal Lahara, Dhenkanal, Athmallik, Hindol, Narsinghpur, Baramba, Tigiria, Khanpara, Nayagarh, Ranpur, Daspalla and Baud. To these there were added in 1905 the following States: Bamra, Rairakhol, Sonpur, Patna and Kalahandi from the Central Provinces, and Gangpur and Bonai from the Chota Nagpur States. The total population in 1915 was 3,798,038 with a revenue of about 60 lakhs. The Feudatory States have no connected or authentic history. Comprising the western and hilly portion of the province of Orissa they were never brought under the central government, but from the earliest times consisted of numerous petty principalities which were more or less independent of one another. They were first inhabited by aboriginal races, who were divided into innumerable communal or tribal groups each under its own chief or headman. These carried on incessant warfare with their neighbours on the one hand and with the wild beasts of the forests on the other. In course of time their hill retreats were penetrated by Aryan adventurers, who gradually overthrew the tribal chiefs and established themselves in their place. Tradition relates how these daring interlopers, most of whom were Rajputs from the north, come to Puri on a pilgrimage and remained behind to found kingdoms and dynasties. It was thus that Jai Singh became ruler of Mayurbhanj over 1,300 years ago, and was succeeded by his eldest son, while his second son seized Keonjhar. The chiefs of Baud and Daspalla are said to be descended from

the same stock; and a Rajput origin is also claimed by the Rajas of Athmallik, Narsinghpur, Pal Lahara, Talcher and Tigiria. Nayagarh, it is alleged, was founded by a Rajput from Rewah, and a scion of the same family was the ancestor of the present house of Khandpara. On the other hand, the chiefs of a few States, such as Athgarh, Baramba and Dhenkanal, owe their origin to favourites or distinguished servants of the ruling sovereigns of Orissa. The State of Ranpur is believed to be the most ancient, the list of its chiefs covering a period of over 3,600 years. It is noteworthy that this family is admittedly of Khond origin, and furnishes the only known instance in which, amid many vicissitudes, the supremacy of the original settlers has remained intact. The States acknowledged the suzerainty of the paramount power and were under an implied obligation to render assistance in resisting invaders; but in other respects neither the ancient kings of Orissa nor their successors, the Mughals and Marathas, ever interfered with their internal administration. All the States have annals of the dynasties that have ruled over them; but they are made up in most part of legend and fiction and long genealogical tables of doubtful accuracy, and contain very few features of general interest. The British conquest of Orissa from the Marathas, which took place in 1803, was immediately followed by the submission of ten of the Tributary States the chiefs of which were the first to enter into treaty engagements.

The States have formed the subject of frequent legislation of a special character. They were taken over from the Marathas in 1803 with the rest of Orissa; but, as they had always been tributary states rather than regular districts of the native governments they were exempted from the operation of the general regulation system. This was on the ground of expediency only and it was held that there was nothing in the nature of British relations with the proprietors that would preclude their being brought under the ordinary jurisdiction of the British courts, if that should ever be found advisable. In 1882 it was held that the States did not form part of British India and this was afterwards accepted by the Secretary of State.

The staple crop in these States is rice. The forests in them were at one time among the best timber producing tracts in India, but until lately forest conservancy was practically unknown. The States have formed the subject of frequent legislation of a special character. The relations with the British Government are governed mainly by the sanads granted in similar terms to all the chiefs in 1894. They contain ten clauses reciting the rights, privileges, duties and obligations of the chiefs, providing for the settlement of boundary disputes, and indicating the nature and extent of the control of the Political Agent.

Political Agent: L. E. B. Cobden-Ramsay, O.I.E., I.C.S., I.S.O.

UNDER THE GOVERNMENT OF THE UNITED PROVINCES.

Three States: Rampur, Tehri and Benares are included under this Government:—

State.	Area Sq. Miles.	Popu- lation.	Revenue in lakhs.
Rampur ..	892	531,898	45
Tehri (Garhwal)	4,200	299,853	6
Benares ..	988	....	....

Rampur is a fertile level tract of country. The ruler Colonel His Highness Alijah Farzandi-i-Dapizir-i-Daulet-i-Inglishia, Mukhlie-ud-Daulah, Nasir-ul Mulk, Amir-ul-Umara, Nawab Sir Syed Mohammed Hamid Ali Khan Bahadur Mustaid Jang, G.C.I.E., G.C.V.O., A.D.C., to His Imperial Majesty the King Emperor. Born 31st August 1875, descended from the famous Sadats of Bahera. Succeeded in February 1889. His Highness is the sole surviving representative of the once great Rohilla power in India. He is the Premier Chief in the United Provinces, and rules over a territory of 892 square miles with a population of 531,217. His Highness is an enlightened Prince and is well educated in Arabic, Persian and English languages. He is a keen supporter of education for Mohammedans, and has travelled extensively in America and Europe. During the Mutiny of 1857 the then Nawab of Rampur displayed his unswerving loyalty to the British Government by affording pecuniary aid, protecting the lives of Europeans, and rendering other valuable services which were suitably recognised by the Paramount Power. This State contributes towards the defence of the Indian Empire by maintaining a well-equipped and well trained battalion of Imperial Service Infantry and a cavalry unit consisting of two squadrons.

The Imperial Service Infantry has served at the Front and a detachment of Imperial Service Lancers is training Government horses at the Remount Depot, Aurangabad.

His Highness has 3 sons, the eldest Sahibzada Syed Raza Ali Khan Bahadur being the heir apparent.

The State has an income of over £300,000 (three hundred thousand pounds) a year.

Tehri State (or Tehri Garhwal).—This State lies entirely in the Himalayas and contains a tangled series of ridges and spurs radiating from a lofty series of peaks on the border of Tibet. The sources of the Ganges and the Jumna are in it. The early history of the State is that of Garhwal District, the two tracts having formerly been ruled by the

same dynasty. Parduman Shah, the last Raja of the whole territory, was killed in battle, fighting against the Gurkhas; but at the close of the Nepalese War in 1815, his son received from the British the present State of Tehri. During the Mutiny the latter rendered valuable assistance to Government. He died in 1859 without issue, and was succeeded by his near relative Bhawani Shah; and he subsequently received a *sanad* giving him the right of adoption. The present Raja Lieutenant H. H. Narendra Shah has completed his education in the Mayo Chiefs' College at Ajmere and is now receiving training in the administration of his State under a Council of Regency. The principal product is rice, grown on terraces on the hill sides. The State forests are very valuable and there is considerable export of timber. The Raja has full powers within the State. A unit of Imperial Service Sappers is maintained. The capital is Tehri, the summer capital being Pratapnagar, 8,000 feet above the sea-level.

Political Agent: The Commissioner of Kumaon.

Benares.—The founder of the ruling family of Benares was one Mansa Ram, who entered the service of the Governor of Benares under the Nawab of Oudh in the early eighteenth century. His son, Balvant Singh, conquered the neighbouring countries and created a big state out of them over which he ruled till 1770. Raja Chet Singh succeeded him, but was expelled by Warren Hastings in 1781. In 1794, owing to the mal-administration of the estates which had accumulated under the Raja of Benares, an agreement was concluded by which the lands held by the Raja in his own right were separated from the rest of the province, of which he was simply administrator. The direct control of the latter was assumed by the Government, and an annual income of one lakh of rupees was assured to the Raja, while the former constituted the Domains. Within the Domains the Raja had revenue powers similar to those of a Collector in a British District, which were delegated to certain of his own officials. There was thus constituted what for over a century was known as the Family Domains of the Maharaja of Benares. On the 1st of April 1911 these Domains became a State consisting of the parganas of Bhadohi (or Konrh) and Chakia (or Kera Mangraur) with the fort of Ramnagar and its appertences. The Maharaja's powers are those of a ruling chief, subject to certain conditions, of which the most important are the maintenance of all rights acquired under laws in force prior to the transfer, the reservation to Government of the control of the postal and telegraph systems, of plenary criminal jurisdiction within the State over servants of the British Government and European British subjects, and of a right of control in certain matters connected with excise. The present ruler is H. H. Maharaja Sir Prabhu Narayan Singh Bahadur, G.C.I.E., who was born in 1855 and succeeded to the State in 1889.

UNDER THE GOVERNMENT OF THE PUNJAB.

Under this Government there are 34 states, varying considerably in size and importance. Area, 36,532 square miles. Population (1911), 4,212,794. Revenue, about £1,000,000.

The Punjab states may be grouped under three main classes. The hill States, 23 in number, lie among the Punjab Himalayas and are held by some of the most ancient Rajput families in all India. Along the western half of the southern border lies the Muhammadan state of Bahawalpur. The remaining States, including the Sikh principalities of Patiala, Jind, Nabha, Kapurthala, Faridkot and Kalsia, and the Muhammadan chiefships of Maler Kotla, Pataudi, Loharu and Dujana, lie east of Lahore, and, with insignificant exceptions, occupy the centre of the eastern plains of the province.

The list below gives details of the area, population, and revenue of the more important states:—

Name.	Area square miles.	Popula- tion.	Revenue Approx. in lakhs.
Bahawalpur ..	15,000	780,394	27
Chamba ..	3,216	134,351	7
Faridkot ..	642	130,374	8
Jind ..	1,259	271,728	15
Kapurthala ..	630	268,244	25
Maler Kotla ..	167	71,144	14½
Mandi ..	1,200	181,110	5
Nabha ..	928	248,892	15
Patiala ..	5,412	1,407,659	72
Sirmur (Nahan)..	1,198	138,564	8

Bahawalpur.—This State, which is about 300 miles in length and about 40 miles wide, is divided lengthwise into three great strips. Of these, the first is a part of the Great Indian Desert; the central tract is chiefly desert, not capable of cultivation, identical with the Bar or Pat uplands of the Western Punjab; and the third, a fertile alluvial tract in the river valley, is called the Sind. The ruling family claims descent from the Abbaside Khalifas of Egypt. The tribe originally came from Sind, and assumed independence during the dismemberment of the Durrani empire. On the rise of Ranjit Singh, the Nawab made several applications to the British Government for an engagement of protection. These, however, were declined, although the Treaty of Lahore in 1809, whereby Ranjit Singh was confined to the right bank of the Sutlej, in reality effected his object. The first treaty with Bahawalpur was negotiated in 1833, the year after the treaty with Ranjit Singh for regulating traffic on the Indus. It secured the independence of the Nawab within his own territories, and opened up the traffic on the Indus and Sutlej. During the first Afghan War the Nawab rendered assistance to the British and was rewarded by a grant of territory and life pension. On his death the succession was disputed and for a time the State was in the hands of the British. The present Nawab is H. H. Nawab Sadiq Muhammad Khan, who was born in 1904 and succeeded in 1907. During his minority the State is managed by a Council of Regency. The chief crops are wheat, rice and millet. The

Lahore-Karachi branch of the North-Western State Railway passes through the State. The State supports an Imperial Service Silladar Camel Transport Corps consisting of 372 men and 966 camels and a Mounted Escort consisting of 299 men and 166 camels, in addition to other troops. The capital is Bahawalpur, a walled town built in 1748.

Political Agent: W. C. Renouf, I.C.S.

Chamba.—This State is enclosed on the west and north by Kashmir, on the east and south by the British districts of Kangra and Gurdaspur, and it is shut in on almost every side by lofty hill ranges. The whole country is mountainous and is a favourite resort of sportsmen. It possesses a remarkable series of copper plate inscriptions from which its chronicles have been completed.

Founded probably in the sixth century by Marut, a Surajbansi Rajput, who built Brahmapura, the modern Barmaur, Chamba was extended by Meru Varma (680) and the town of Chamba built by Sahil Varma about 920. The State maintained its independence, until the Moghal conquest of India.

Under the Moghals it became tributary to the empire, but its internal administration was not interfered with, and it escaped almost unscathed from Sikh aggression. The State first came under British influence in 1846. The part, west of the Ravi, was at first handed over to Kashmir, but subsequently the boundaries of the State were fixed as they now stand, and it was declared independent of Kashmir. The present chief is H. H. Raja Sir Bhure Singh, K.C.S.I., K.C.I.E., who was born in 1869, and succeeded in 1904. The principal crops are rice, maize and millets. There are some valuable forests which were partly leased to Government in 1864 for a term of 99 years, but the management of them has now been retroceded to the Chamba Durbar. The mountain ranges are rich in minerals which are little worked. The principal road to Chamba town is from Pathankot, the terminus of the Amritsar Pathankot branch of the North-Western Railway. The Raja is the head of the judicial department and is assisted by the Wazir-i-Wazarats. Chamba town, on the right bank of the Ravi, contains a number of interesting temples, of which that of Lakshmi Narayan, dating possibly from the tenth century, is the most famous.

Faridkot.—The ruling family of this sandy level tract of land belongs to the Sidhu-Barar clan of the Jats, and is descended from the same stock as the Phulkian houses. Their occupation of Faridkot and Kot Kapura dates from the time of Akbar, though quarrels with the surrounding Sikh States and internal dissensions have greatly reduced the patrimony.

The present chief, Farzand-i-Saadat Nishan Hazrat-i-Kaisar-i-Hind Brar Bans Raja Har Indar Singh Bahadur was born in 1915 and succeeded his father in 1919. Under the orders of the Government of India the administration of the State has been entrusted to a Council of Administration consisting of a President and 4 members. The State has an area of 643 square miles with a population of 130,294

and has an annual income of 12 lakhs. The ruler is entitled to a salute of 11 guns. The State possesses a company of Imperial Service Sappers.

Jind.—The three Native States of Jind, Patiala and Nabha form collectively the Phulkian States, the most important of the Cis-Sutlej States. This area is the ancestral possession of the Phulkian houses. It lies mainly in the great natural tract called the Jangal (desert or forest), but stretches north-east into that known as the Pawadh and southwards across the Ghaggar into the Nardak, while its southernmost tract, round the ancient town of Jind, claims to lie within the sacred limits of Kurukshetra. This vast tract is not, however, the exclusive property of the States; for in it lie several islands of British territory, and the State of Maler Kotla enters the centre of its northern border. On the other hand, the States hold many outlying villages surrounded by British territory.

The history of Jind as a separate State dates from 1763 when the confederated Sikhs captured Sirhind town and partitioned the whole Jind Province. The Maharaja of Jind, H. H. Maharaja Sir Ranbir Singh, G.C.I.E., K.C.S.I., was born in 1879 and succeeded in 1887. He is descended from the ancestors of the Phulkian family. During the Sikh War and the Mutiny the Raja of Jind was of great service to the British and was rewarded with a grant of nearly 600 square miles of land. The principal crops are wheat, barley and gram. The only industries of importance are the manufactures of gold and silver ornaments, leather and woodwork and cotton cloth. The capital is Sangru which is connected by a State Railway with the North-Western Railway. Under His Highness' Court there is a Council Wizarat which controls all the departments of the State.

Kapurthala.—This State consists of three detached pieces of territory in the great plain of the Doab. The ancestors of the chief of Kapurthala at one time held possessions both in the Cis and Trans-Sutlej and also in the Bari Doab. In the latter lies the village of Ahlu, whence the family springs, and from which it takes the name of Ahluwalia. Some of these estates were confiscated after the first Sikh War and when the Jullundur Doab came under the dominion of the British Government in 1846, the estates north of the Sutlej were maintained in the independent possession of the Ahluwalia chieftain, conditional on his paying a commutation in cash for the service engagements by which he had previously been bound to Ranjit Singh. The Bari Doab estates have been released to the head of the house in perpetuity, the civil and police jurisdiction remaining in the hands of the British authorities. For good services during the Mutiny, the Raja was rewarded with a grant of other States in Oudh in which, however, he exercises no ruling powers, though in Oudh he is, to mark his superiority, addressed as Raja-i-Rajagan. The present chief is H. H. Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., who was born in 1872 and succeeded in 1887. He was granted the title of Maharaja as an hereditary distinction in 1911. The chiefs of Kapurthala are Sikhs. Sardar Jassa Singh was always known as Jassa Kajal; but the

family claim descent from Rana Kapur, a semi-mythical member of the Rajput house of Jaisalmer, who is said to have left his home and founded Kapurthala 900 years ago. Only a small proportion of the population however are Sikhs, the majority being Mahomedans. The chief crops are wheat, gram, maize, cotton and sugar-cane. The town of Sultanpur in this State is famous for hand-painted cloths. The main line of the North-Western Railway passes through part of the State and the Grand Trunk Road runs parallel to it. A branch railway from Jullundur City to Ferozepur passes through the State. Kapurthala maintains a battalion of Imperial Service infantry and a small force of local troops. The capital is Kapurthala, which is said to have been founded in the eleventh century.

Agent to the Lieutenant-Governor for Kapurthala, the Commissioner of the Jullundur Division.

Maler Kotla.—This State consists of a level sandy plain bounded by the district of Ludhiana on the north and by Patiala territory elsewhere. The Nawabs of Maler Kotla are of Afghan descent, and originally held positions of trust in the Sirhind province under the Moghal Emperors. As the Empire sank into decay during the eighteenth century, the local chiefs gradually became independent. The result was constant feuds with the adjacent Sikh States. After the victory of Laswari, gained by the British over Sindhia in 1803, and the subjugation and flight of Holkar in 1805, when the Nawab of Maler Kotla joined the British army, the British Government succeeded to the power of the Marathas in the districts between the Sutlej and the Jumna. The final treaty which affirmed the dependence of the State on the British Government was signed after the submission of Ranjit Singh in 1809. The present Nawab is H. H. Nawab Ahmad Ali Khan Bahadur, K.C.S.I., who was born in 1881 and succeeded in 1908. He was created Hon. Major in the Indian Army for his services during the war. The chief products are cotton, sugar and opium. The State supports two double companies of Imperial Service Sappers. The capital is Maler Kotla. Revenue 14½ lakhs.

Mandi.—This is a mountainous State in the upper reaches of the Beas. It has a history of considerable length, as it once formed part of the Suket State. Its relations with the British were determined after the battle of Sobraon in 1846. The present minor Chief H. H. Raja Jogindra Sen was installed in 1913. The administration is carried on by Mr. J. R. S. Parsons, I.C.S., the Superintendent, and Mahta Ganda Mal, Assistant Superintendent. The principal crops are rice, maize, wheat and millet. About three-fifths of the State are occupied by forest and grazing lands. It is rich in minerals. The capital is Mandi, founded in 1527, which contains several temples and other buildings of interest and is one of the chief marts for commerce with Ladakh and Yarkhand.

Nabha.—Nabha which became a separate State in 1763 is one of the 3 Phulkian States—Nabha, Patiala and Jind and though second in point of population and revenue of the 3 sister States, it claims seniority being descended from the eldest branch. It consists of two

distinct parts, the main portion comprising 12 separate pieces of territory scattered among the other Punjab States and Districts, forms the City of Nabha and the *Nizamats* of Phul and Amloh; the second portion forms the *Nizamat* of Bawal in the extreme south-east of the Punjab on the border of Rajputana; this *Nizamat* of Bawal was subsequently added to its territory as a reward from the British Government for the loyalty of the Rulers of Nabha. The State now covers an area of about 1,000 square miles and has a population of about 3 lakhs. The present Ruler is Shri Maharaja Ripudaman Singhji Malavendra Bahadur, who was born in 1883 and succeeded his father in 1911. The administration of the State is carried on by His Highness the Maharaja assisted by a Council of Ministers. The High Court is the head of the Judicial Department. The State supports one battalion of Imperial Service Infantry consisting of 600 men; besides this there are local forces of Infantry, cavalry and artillery, etc., consisting of about 1,000 men all told and also a Transport Corps. For the preservation of the peace there is a Police force consisting of about 600 men.

The State is traversed by the main and 3 branch lines of the N. W. Railway and the Rajputana Malwa Railway crosses the *Nizamat* of Bawal. A large portion of the State is irrigated by the Sirhind Canal. The crops of the State are gram, pulses, bajra, sugarcane, cotton, wheat and barley; to facilitate trade the Darbar has opened grain markets and Banks near the principal railway stations within the State territory; The chief industries of the State consist of the manufacture of silver and gold ornaments, brass utensils, and cotton carpets, lace and *gota*, etc. There are some ginning factories and a cotton steam press in the State which are working successfully. The State has so far contributed roughly about 45 lakhs of rupees to the various funds and loans in connection with the War, including a fully equipped Hospital Ship for Mesopotamia, people of the State have subscribed about 13 lakhs to the Indian War Loans.

Patiala.—This is the largest of the Phulkian States, and the premier State in the Punjab. Its territory is scattered and interspersed with small estates and even single villages belonging to other States and British districts. It also comprises a portion of the Simla Hills and territory on the border of Jaipur and Alwar States. Area 5,951 square miles. Population 1,407,659. Its history as a separate state begins in 1762. During the Sikh war and the Mutiny the Maharaja was loyal and was substantially rewarded. The present Ruler, His Highness Farzand-i-Khas Daulat-i-Inglishia Mansur-i-Zaman Amir-ul-Umra Maharaja

Dhiraj Rajeshwar Sri Maharaja-i-Rajgan Major General Sir Bhupinder Singh Mahinder Bahadur, G.C.I.E., G.B.E., was born in 1891 and succeeded in 1909. During his minority his administrative functions were exercised by a Council of Regency consisting of three members. The principal crops are gram, barley and wheat; cotton and tobacco are also grown in parts of the state. A great part of the state is irrigated by the Sirhind and Western Jumna Canal distributaries. It possesses valuable forests. The State is rich in antiquities, especially at Pinjaur, Sunam and Sirhind. The North-Western Railway, the E. I. Railway, and a branch of the B. B. and C. I. Railway traverse the state. It contains an Imperial Service contingent of a regiment of cavalry and two battalions of infantry. The State has besides these standing forces supplied British Government with two mule and one camel corps raised expressly for war exigencies. Also undertaken to raise three new battalions of full war strength. In 1900 it was decided by the Government of India to appoint a Political Agent for Patiala and the other two Phulkian States of Jind and Nabha were included in the Agency, to which was afterwards added the Mohammadan State of Bhawalpur, but a separate Agency has since been established for this last mentioned state. The Headquarters of the Agency are at Patiala. Gross income in round figures is 1,10,00,000 rupees per annum.

Sirmur (Nahan).—This is a hilly State in the Himalayas under the Political control of the Commissioner of Ambala Division. Its history is said to date from the 11th century. In the eighteenth century the State was able to repulse the Gurkha invasion, but the Gurkhas were invited to aid in the suppression of an internal revolt in the State and they in turn had to be evicted by the British. In 1857 the Raja rendered valuable services to the British, and during the second Afghan War he sent a contingent to the North-West Frontier. The present Chief is Lieut.-Colonel H. H. Maharaja Amar Prakash Bahadur, K.C.S.I., who was born in 1888 and succeeded in 1911. The main agricultural feature of the State is the recent development of the Kiarda Dun, a fertile level plain which produces wheat, gram, rice, maize and other crops. The State forests are valuable and there is an iron foundry at Nahan which was started in 1867 but, being unable to compete with the imported iron, is now used for the manufacture of sugar-cane crushing mills. The State supports an Imperial Service Corps of Sappers and Miners which served in the Tirah Expedition of 1897 and has been serving in the war. It was captured with General Townshend's force at Kut-al-Amara but the Corps has since been re-constituted and has again gone on service.

UNDER THE GOVERNMENT OF BURMA.

Under this Government there are four Shan States, two in the Mandalay Division (Hkamti Long and Mong Mit); and two in the Sagaing Division (Hsawnghsup and Singkaling Hkamti), the area of which is 7,374 square miles and the population about 67,051, consisting chiefly

of Buddhists. There are in addition 48 petty States, 5 in the Northern Shan States, 43 in the Southern Shan States, with an area of 58,835 square miles and a population of 1,358,498 consisting of Buddhists and Animists.

The Shan States—Though a portion of British India, do not form part of Burma proper and are not comprised in the regularly administered area of the Province. They lie for the most part to the east of Upper Burma. They owed allegiance to the Burmese Government, but were administered by their own rulers (Sawbwas) and the British Government has continued to a certain extent the semi-independence which it found existing in 1835. As at present defined, the Shan States are divided into—

1. States under the supervision of the Superintendent, Northern Shan States, whose headquarters are at Lashio; area 14,294 square miles and population 58,952.
2. States under the supervision of the Superintendent and Political Officer, Southern Shan States, whose headquarters are at Taunggyi; area, 40,434 square miles and population 900,202.

There are five States in the Northern and 38 in the Southern Shan States. There are in addition two Shan States under the supervision of the Commissioner of the Mandalay Division, namely, Hkamti Long in the unadministered territory to the north of the Myitkyina District and Mong Mit lying north-east of the Ruby Mines District. In the north-west of the Upper Chindwin District towards Manipur there are two small Shan States, Hsawngshup and Singkaling Hkamti, whose administration is supervised by the Commissioner of the Sagaing Division.

The Northern Shan States are North Hsenwi in the north, South Hsenwi near the Salween in the east, Manglon in the south-east, Hsipaw in the south-west, and Tawngpeng in the north-west. The Wa States east of the Salween can hardly be said to be under British control. In ordinary matters the States are administered by their Sawbwas, who are assisted by amats, or ministers, in various departments. The Superintendent exercises general control

over the jurisdiction of justice and is vested with wide revisionary powers. In revenue matters the Sawbwas administer their States in accordance with local customs which have been but little modified. Of prime importance in the economy of the country is the Mandalay Lashio railway, 180 miles in length, of which 126 miles lie within the Northern Shan States. The line is a single track, and was constructed in the face of considerable engineering difficulties, of which not least the notable was the Gokteik gorge, now spanned by a viaduct. It had been proposed to continue the railway about 90 miles farther east to the Kunlong, where is a ferry over the Salween, and eventually to penetrate into Yunnan; but this extension is for the present in abeyance.

The most important of the Southern Shan States are Kengtung and Yawnghwe. Under the supervision of the Superintendent and Political Officer and his Assistants, the chiefs—known as Sawbwas, Myozas, and Ngwegunhmus—control their own States, exercising revenue, civil and criminal jurisdiction therein. There are in all 9 Sawbwas; 18 Myozas and 11 Ngwegunhmus.

Karenni.—This district consists of five States, with a total area of approximately 4,200 square miles and a population of about 64,000, lying on the frontier south of the Shan States. The largest State is Kantarawadi with an area of 3,000 square miles, a population of nearly 40,000, and a gross revenue of about 1½ lakhs of rupees. More than half of the inhabitants belong to the Red Karens, a people low in the scale of civilisation. An Assistant Political Officer is posted at Loikaw as Agent of the British Government, and a certain amount of control is exercised through him over the chiefs. The principal wealth of the country is teak timber, and the considerable alien population is largely supported by the timber trade, which, however, has declined greatly in the last few years. The Karens themselves are distinguished as hunters.

UNDER THE GOVERNMENT OF ASSAM.

The only State of importance under the Chief Commissioner of Assam is **Manipur**, which has an area of 8,456 square miles and a population of 346,222, of which about 60 per cent. are Hindus, and 36 per cent. animistic forest tribes. Manipur consists of a great tract of hilly country and a valley, about 30 miles long 20 miles wide, which is shut in on every side. The State adopted Hinduism in the early eighteenth century, when it came under a Naga Raja who subsequently made several invasions into Burma. On the Burmese retaliating, Manipur negotiated a treaty of alliance with the British, in 1762. The Burmese again invaded Manipur during the first Burmese War and on the conclusion of peace, in 1826, Manipur was declared independent. The chief event in its subsequent history was the intervention of the British in 1891 to establish the claim of Kula Chandra Singh as Maharaja, followed by the treacherous murder of the Chief Commissioner, Mr. Quinton and the officers with him and the withdrawal of the escort which accompanied him. From 1891 to 1903 the State was administered by a Political Agent and Superintendent of the State during

the minority of H. H. Raja Chura Chand Singh. The Raja was invested with ruling powers in 1908. The administration of the State is now conducted by the Durbar, consisting of the Raja as President, a vice-president, a member of the Indian Civil Service whose services are lent to the State, three ordinary and three additional members who are all Manipuris. The staple crop of the country is rice. Forests of great variety cover the whole of the hill ranges.

Khasi and Jaintia Hills.—These petty chiefships, 25 in number, with a total area of about 3,900 square miles and a population of 126,000, are included under the Government of Assam. Most of the States have treaties or engagements with the British Government. The largest of them is Khyrim, the smallest is Nonglewai, which has a population of 169. Most of them are ruled by a chief or Siem. The Siemship usually remains in one family; but the succession was originally controlled by a small electoral body constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a

Khasi State has always been of a very democratic character, a Siem exercising but little control over his people. Among many of the north-east frontier tribes there is little security of life and property, and the people

are compelled to live in large villages on sites selected for their defensive capabilities. The Khasis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small.

UNDER THE GOVERNMENT OF THE CENTRAL PROVINCES.

The Central Provinces include fifteen feudatory States subordinate to the administration, with an area of 31,174 square miles and a population of 2,117,002. One of the States, Makrai, lies within Hoshangabad District; the remainder are situated in the Chhattisgarh Division, to the different districts of which they were formerly attached. Their relations with Government are controlled by a Political Agent. The States vary greatly in size and importance. Sakti the smallest, having an area of 138 square miles and Bastar the largest an area of 13,062 square miles. They are administered by hereditary chiefs, who hold on conditions of loyalty and good government set forth in patents and acknowledgments of fealty, but are nominally free from direct interference save in the case of sentences of death, which require the Chief Commissioner's confirmation. But, as a fact, the Government has exercised a very large amount of control, owing mainly to the frequency with which the States have been taken under direct management, because of either the minority or the misconduct of the chief.

The States pay a tribute to Government which amounts in the aggregate to about 2½ lakhs.

Statistics relating to the chief States are contained in the following table:—

State	Area.	Population 1911.	Revenue (approximate) in Lakhs.
	Sq. Miles.		
Bastar ..	13,062	433,310	3
Jashpur ..	1,963	174,458	1
Kanker ..	1,429	127,014	2
Khairagarh ..	931	155,471	3
Nandgaon ..	871	167,362	4
Raigarh ..	1,486	218,860	2
Surguja ..	6,055	248,703	2
Eight other	5,377	411,824	6
States.			
Total ..	31,174	2,117,002	23

Bastar.—This State, which lies to the south-east corner of the Provinces, is the most important of the group. It has an area of 13,062 square miles and a population of 433,310. The family of the Raja is very ancient, and is stated to belong to the Rajputs of the Lunar race. Up to the time of the Marathas, Bastar occupied an almost independent position, but a tribute was imposed on it by the Nagpur government in the eighteenth century. At this period the constant feuds between Bastar

and the neighbouring State of Jeypore in Madras kept the country for many years in a state of anarchy. The chief object of contention was the Kotpad tract, which had originally belonged to Bastar, but had been ceded in return for assistance given by Jeypore to one of the Bastar chiefs during some family dissensions. The Central Provinces Administration finally made this over to Jeypore in 1863, on condition of payment of tribute of Rs. 3,000, two-thirds of which sum was remitted from the amount payable by Bastar. By virtue of this arrangement the tribute of Bastar was, until recently, reduced to a nominal amount. The cultivation of the State is extremely sparse. Rice is the most important crop. The State is ruled by the feudatory Chief, Raja Rudra Pratap Deo. He is a Donatè of the Order of St. John of Jerusalem. The Dewan of the State (Khan Bahadur Hafiz Mohammad Walayatullah) is an extra Assistant Commissioner of the Central Provinces on deputation who has three assistants under him. After a recent period of disturbance the State has returned to complete tranquillity and precautions are being taken to remove all causes of unrest by better supervision over the minor State officials and a very considerate forest policy. The chief town is Jagdalpur on the Indravati River. The famous falls on the Indravati called the Chitrakote are 23 miles away from Jagdalpur.

Surguja.—Until 1905 this was included in Chota Nagpur State of Bengal. The most important feature is the Manipat, a magnificent tableland forming the southern barrier of the State. The early history of Surguja is obscure; but according to a local tradition in Palamau, the present ruling family is said to be descended from a Raksel Raja of Palamau. In 1758 a Maratha army overran the State, and compelled its chief to acknowledge himself a tributary of the Bhonsla Raja. At the end of the eighteenth century, in consequence of the chief having aided a rebellion in Palamau against the British, an expedition entered Surguja; and, though order was temporarily restored, disputes again broke out between the chief and his relations, necessitating British interference. Until 1818 the State continued to be the scene of constant lawlessness; but in that year it was ceded to the British Government under the provisional agreement concluded with Mudhoji Bhonsla of Berar, and order was soon established. The principal crops are rice and other cereals. The present Chief of the State is Maharaja Ramanuj Saran Singh Deo, C.B.E., who succeeded to the *gadi* in 1918 and enjoys full powers of a Feudatory Chief.

KASHMIR.

Kashmir (known to Indians as Jammu) lies to the east of the Indus and to the west of the Ravi. It is a mountainous country with just a strip of level land along the Punjab frontier, and intersected by valleys of which many are of

surpassing beauty and grandeur. It may be divided physically into two areas: the north-eastern comprising the area drained by the Indus with its tributaries, and the south-western, including the country drained by the Jhelum,

the Kishanganga and the Chenab. The dividing line between those two areas is the great central mountain range. The area of the State is 84,432 square miles, and the population 3,158,126.

HISTORY.—Various poets have left more or less trustworthy records of the history of the valley down to 1586, when it was conquered by Akbar. Srinagar, the capital, had by then been long established, though many of the fine buildings erected by early Hindu rulers had been destroyed by the Mahomedan kings who first appeared in the 12th century. In the reign of Sikandar the population became almost entirely Mahomedan. Akbar visited the valley three times. Jehangir did much to beautify it; but after Aurangzebe there was a period of disorder and decay, and by the middle of the eighteenth century the *Subah* of Kashmir was practically independent of Delhi. Thereafter it experienced the oppression of Afghan rule until it was rescued, in 1819, by an army sent by Ranjit Singh. Sikh rule was less oppressive than that of the Afghans. The history of the State as at present constituted is practically that of one man, a Dogra Rajput, Gulab Singh of Jammu. For his services to the Sikhs this remarkable man had been made Raja of Jammu in 1820, and he added largely to his territory by conquest. He held aloof from the war between the British and the Sikhs, only appearing as mediator after the battle of Sobraon (1846) when the British made over to him for Rs. 75 lakhs the present territories of the State. He had to fight for the valley and subsequently lost part of his State, Gilgit, over which the successors had at a heavy cost to reassert their claims. His son Ranbir Singh, a model Hindu, ruled from 1857 to 1885, when he was succeeded by his eldest son Major-General H. H. Maharaja Sir Partab Singh, G.C.S.I., G.C.I.E.

ADMINISTRATION.—For some years the administration of the State was conducted by a Council over which the Maharaja presided but since 1905 he has exercised full powers, assisted by a Chief Minister—Rai Saheb Diwan Amar Nath, C.I.E.—a Home Minister, and a Revenue Minister. The four chief executive officers are the Governors of Jammu and of Kashmir, the Wazir Wazarat of Gilgit and the Wazir Wazarat of Ladakh. The real administrative power lies with the petty subordinate officers (*tahsildars*) who exercise revenue, civil, and criminal jurisdiction with regular stages of appeal: but distance and the absence of easy communications are practical checks on the use or abuse of appeals. The British Resident has his headquarters at Srinagar; there is also a Political Agent at Gilgit responsible to the Government of India for the administration of the outlying petty States; and a British Officer is stationed at Leh to assist in the supervision of Central Asian trade. In the Dogras the State has splendid materials for an Army, which consists of 6,961 troops, of whom 3,370 are maintained as Imperial Service troops.

FINANCE.—The financial position of the State is strong, and it has more than 46 lakhs invested in Government of India securities. The total revenue last year was 93 lakhs, the chief items being land revenue, forests, customs and octroi.

PRODUCTION AND INDUSTRY.—The population is pre-eminently agricultural and pastoral.

The system of land tenure has been described as "ryotwari in ruins," great complexity existing owing to the fact that there is no local law of rent and revenue. The principal food crop is rice, maize, cotton, saffron, tobacco, hops (autumn crops) and wheat, barley, poppy, beans (spring crops) are also grown. Sheep are largely kept. The State forests are extensive and valuable. A survey of the mineral resources of the State is being conducted under an expert. Vast fields of irritable, dusty coal have been found. Gold has been found at Gulmarg, Sapphires in Padar Aquamarine in Skardu and lead in Uri. The industries of manufacture are chiefly connected with sericulture (the silk filature at Srinagar, the largest in the world, was destroyed by fire in July 1912), oil-pressing and the manufacture of wine. The woollen cloth, shawls, and wood carving of the State are famous.

COMMUNICATIONS.—Great efforts have been made and are being made towards the improvement of wheeled traffic in the Kashmir State. The Jhelum Valley Road (196 miles) which links the Kashmir Valley with the Punjab and the North Western Province is used by wheeled traffic of sorts, *viz.*, Ekkas, Tangas, Carts, Motor Cars and Motor Lorries. The Banihal Cart Road (nearly as long as the Jhelum Valley Road) which is nearing completion, will soon join Kashmir with the Jammu Tawi Railway Station. Roads fit for pack-animals lead from Srinagar, the summer Capital of Kashmir, to the frontier districts of Gilgit and Leh. Internal village communications have also been much improved.

PUBLIC WORKS.—In 1904, a flood spill channel above Srinagar was constructed with a view to minimising the constant risk of floods; and it was hoped that the danger would be still further reduced by the carrying out of a scheme for lowering a part of the bed of the Jhelum, which has since been taken in hand. Good progress has been made with irrigation; but the most important schemes of recent years have been those for an electrical power station on the Jhelum River, and for a Railway into Kashmir. It was proposed to supply from this power station electrical energy for various State schemes (including the Jhelum dredging scheme) and for private enterprise and possibly for working the proposed Kashmir Railway. The works were completed about 1907, and the scheme according to the latest reports is working very satisfactorily. The proposal for a railway to Kashmir had been under discussion for many years, the nature of the country making the question of route a difficult one. In 1905, a decision was taken in favour of a line from Srinagar *via* the Jhelum Valley and Abbottabad, but the project has remained in abeyance pending the consideration of further schemes, among which are proposals for lines of ropeway from Jammu to Srinagar and from Srinagar to the western borders *via* the Jhelum Valley.

EDUCATION.—In education Kashmir is still backward. In the State as a whole only 2 in every 100 persons can read and write. The number of educational institutions including two Colleges is 715.

Resident:—Lieut-Col. A. D' A. G. Bannerman, C.V.O., C.I.E.

Political Agent at Gilgit:—Major C. A. Smith.

Native States' Tribute.

Many of the States pay tribute, varying in amount according to the circumstances of each case; to the British Government. This tribute is frequently due to exchanges of territory or settlement of claims between the Governments, but is chiefly in lieu of former obligations to supply or maintain troops. The actual annual receipts in the form of tribute and contributions from Native States are summarised in the following table. The relations of the States to one another in respect of tributes are complicated, and it would serve no useful purpose to enter upon the question. It may, however, be mentioned that a large number of the States of Kathiawar and Gujarat pay tribute of some kind to Baroda, and that Gwalior claims tribute from some of the smaller States of Central India:—

States paying tribute directly to the Government of India.

										£	
Tribute from Jaipur										26,667	
" " Kotah										15,648	
" " Udaipur										13,333	
" " Jodhpur										6,533	
" " Bundi										8,000	
" " Other States										15,170	85,351
Contribution of Jodhpur towards cost of Erinpura Irregular Force ..										7,667	
" of Kotah towards cost of Deoli Irregular Force ..										13,333	
" of Bhopal towards cost of Bhopal Levy ..										10,753	
" of Jaora towards cost of United Malwa Contingent ..										9,142	
Contributions towards cost of Malwa Bhil Corps										2,140	
Fees on succession											43,035
										3,437	
Total ..											131,823
<i>Central Provinces and Berar.</i>											
Tribute from various States .. .. .										....	15,696
<i>Burma.</i>											
Tributes from Shan States										23,524	
" " other States										1,367	29,891
<i>Eastern Bengal and Assam.</i>											
Tribute from Manipur										3,333	
" " Rambrai										7	3,340
<i>Bengal.</i>											
Tribute from various States .. .. .										....	4,514
<i>United Provinces.</i>											
Tribute from Benares										12,667	
" " Kapurthala (Bahraich)										8,733	
<i>Punjab.</i>											
Tribute from Mandi										6,667	21,400
" " other States										3,086	
Fees on succession										133	
<i>Madras.</i>											
Tribute from Travancore										53,333	
Peshkash and subsidy from Mysore										233,333	
" " " " Cochin										13,333	
" " " " Travancore										888	300,887
<i>Bombay.</i>											
Tribute from Kathiawar										31,129	
" " various petty States										2,825	
Contribution from Baroda States										25,000	
" " Jagirdars, Southern Mahratta Country										5,765	
Subsidy from Cutch										5,484	
Fees on succession										3,457	
											73,660
Grand Total .. .. .										....	591,097

It was announced at the Coronation Durbar of 1911 that there would in future be no Nazarana payments on successions.

Foreign Possessions in India.

Portugal and France both hold small territorial possessions in the Indian Peninsula.

The Portuguese possessions in India consist of the province of Goa, situated within the limits of the Bombay Presidency, on the Arabian Sea coast; the territory of Daman with the small territory called Pragana-Nagar Avdy on the Gujarat coast, at the entrance to the Gulf of Cambay; and the little island of Diu with two places called Gogla and Simbor, on the southern extremity of the Kathiawar Peninsula.

GOA.

Goa forms a compact block of territory surrounded by British districts. Savantwadi State lies to the north of it, the Arabian Sea on the west and North Kanara on the south, and the eastern boundary is the range of the Western Ghats, which separates it from the British districts of Belgaum and North Kanara. The extreme length from north to south is 62 miles and the greatest breadth from east to west 40 miles. The territory has a total area of 1,301 square miles and consists of the *Velhas Conquistas*, or Old Conquests, comprising the island of Goa, acquired by the Portuguese in 1510, and the neighbouring districts of Salsette and Bardez, acquired in 1543; and of the *Novas Conquistas*, or New Conquests, comprising the districts of Pernem, Sanquelim, Satary, Ponda, Sanguem, Quepem and Canacona, acquired in the latter half of the 18th century. The small island of Angediva situated opposite the port of Karwar, in the British district of North Kanara, forms administratively a portion of the province of Goa. This was acquired in 1505. The whole country is hilly, especially the eastern portion, the predominating physical feature being the Eastern Ghats, which besides bounding the country along the north-east and south-east, jut off westward and spread across the country in a succession of spurs and ridges. There are several conspicuous isolated peaks, of which the highest, Sonsagar, is 3,827 feet high.

The country is intersected by numerous rivers running westward from the Ghats, and the principal eight, which are all navigable, are in size of some importance. Goa possesses a fine harbour, formed by the promontaries of Bardez and Salsette. Half-way between these extremities lies the *cabo*, or cape, which forms the extremity of the island of Goa. This divides the whole bay into two anchorages, known as Aguada and Marmagao. Both are capable of accommodating the largest shipping from September to May, but Aguada is virtually closed during the south-west monsoon, owing to the high winds and sea and to the formation of sand bars across the estuary of the Mandovi river, which opens into Aguada. Marmagao is accessible at all times and is therefore the harbour of commercial importance. It is the terminus of the railway running to the coast from the inland British system of lines, a breakwater and port have been built there and the trade is considerable, being chiefly transit trade from British territory.

The People.

The total population in the whole Goa territory was 486,752 at the census of 1910. This gives a density of 343 persons to the square mile and the population showed an increase of 6 per cent. since the census ten years previously. In the Velhas Conquistas 91 per cent. of the population is Christian. In the Novas Conquistas Christians and Hindus are almost equally numerous. The Moslems in the territory are numbered in a few thousands. The Christians still very largely adhere to caste distinctions, claiming to be Brahmans, Charados and low castes, which do not intermarry. The Hindus are largely Maratha and do not differ from those of the adjacent Konkan districts of Bombay. All classes of the people, with the exception of Europeans, use the Konkani dialect of Marathi, with some admixture of Portuguese words. The official language is Portuguese, which is commonly spoken in the capital and the principal towns, as well as by all educated people. Nearly all the Christians profess the Roman Catholic religion and are spiritually subject to an archbishop, who has the titles of Primate of the East and Patriarch of the East Indies and exercises ecclesiastical jurisdiction also over a great portion of British India. (The Christians of Daman and Diu are subject to a Bishop who bears the titles of Bishop of Daman and Archbishop of Cranganore.) There are numerous churches in Goa, mostly built by the Jesuits and Franciscans prior to the extinction of the religious orders in Portuguese territory. The churches are in charge of secular priests. Hindus and Mahomedans now enjoy perfect freedom in religious matters and have their own places of worship. In the early days of Portuguese rule the worship of Hindu gods in public and the observance of Hindu usages were strictly forbidden and rigorously suppressed.

The Country.

One-third of the entire territory of Goa is stated to be under cultivation. A regular land survey was only recently made. The fertility of the soil varies considerably according to quality, situation and water-supply. The Velhas Conquistas are as a rule better cultivated than the Novas Conquistas. In both these divisions a holding of fifteen or sixteen acres would be considered a good sized farm, and the majority of holdings are of smaller extent. The staple produce of the country is rice, of which there are two good harvests; but the quantity produced is barely sufficient to meet the needs of the population for two-thirds of the year. Next to rice, the culture of cocoanut palms is deemed most important, from the variety of uses to which the products are applied. Hilly places and inferior soils are set apart for the cultivation of cereals and several kinds of fruits and vegetables are cultivated to an important extent. The condition of the agricultural classes in the Velhas Conquistas has improved during recent years; owing to the general rise in the prices of all classes of agricultural produce and partly to the current of emigration to British territory. Stately forests are found in the Novas

Conquistas. They cover an area of 116 square miles and are under conservation and yield some profit to the administration. Iron is found in parts of the territory, but has not been seriously worked. Manganese also exists and was worked to an important extent a few years ago.

Commerce.

In the days of its glory, Goa was the chief entrepot of commerce between East and West and was specially famous for its trade in horses with the Persian Gulf. It lost its commercial importance with the downfall of the Portuguese empire and its trade is now insignificant. Few manufacturing industries of any moment exist, and most manufactured articles in use are imported. Exports chiefly consist of cocoanuts, betel nuts, mangoes and other fruits and raw produce. A line of railway connects Marmagao with the Madras and Southern Mahratta Railway. Its length from Marmagao to Castle Rock, above the Ghats, where it joins the British system, is 51 miles, of which 49 are in Portuguese territory. The railway is under the management of the Madras and Southern Mahratta Railway administration, and the bulk of the trade of Marmagao port is what it brings down from and takes to the interior. The telegraphs in Goa territory are worked as part of the system of British India, and are maintained jointly by the British and Portuguese Governments. The Goa territory was formerly subject to devastating famines and the people now suffer heavy losses in times of drought. They are then supplied, though at great cost, with rice from British territory.

The Capital.

Nova Goa, the present capital of Portuguese India, comprehends Panjim and Ribandar, as well as the old city of Goa, and is six miles in extent. Old Goa is some five miles distant from the new city. Panjim occupies a narrow strip of land leading up to the Cabo, the cape dividing the Aguada bay from that of Marmagao, and mainly slopes down to the edge of the Aguada. It was selected as the residence of the Portuguese Viceroy in 1759, and in 1843 it was raised to its present rank as the capital of Portuguese India. The appearance of the city, with its row of public buildings and elegant private residences, as seen from the water, is very picturesque and this impression is not belied by a closer inspection of its neat and spacious roads, bordered by decent, tidy houses. The most imposing public structures are the barracks, an immense quadrangular building the eastern wing of which accommodates the Lyceum, the Public Library and the Government Press. Other noticeable buildings are the Cathedral and various churches, the viceregal palace, the High Court and so on. The square in the lower part of the town is adorned with a life-sized statue of Albuquerque standing under a canopy.

History.

Goa was captured for the Portuguese by Alfonso de Albuquerque in 1510. Albuquerque promptly fortified the place and established Portuguese rule on a firm basis. From this time Goa rapidly rose in importance and be-

came the metropolis of Portuguese power in the East. There was constant fighting with the armies of the Bijapur Kingdom, but the Portuguese held their own and gained the surrounding territory now known as the Velhas Conquistas.

The subsequent history of the town is one of ostentation and decay. Goa reached its summit of prosperity at the end of the sixteenth century. The accounts of travellers show that the Goa of those days presented a scene of military, ecclesiastical and commercial magnificence which has had no parallel in the British capitals of India. But the Portuguese based their dominion in India on conquest by the sword and they laboured to consolidate it by a proselytizing organisation which throws the missionary efforts of every other European power in India into the shade. Old Goa, as the ruins of the old capital are called to-day, had a hundred churches, many of them of magnificent proportions, and the Inquisition was a power in the land. The result showed how rotten was this basis and how feebly cemented the superstructure reared upon it.

Modern Times.

There was frequently recurring fighting and in 1741 the Marathas invaded the neighbourhood of Goa and threatened the city itself. An army of 12,000 men arrived from Portugal at the critical moment. The invaders were beaten off, and the Novas Conquistas were added to the Portuguese possessions. In 1844 the shelter given by Goa to fugitives from justice in British territory threatened to bring about a rupture with the British Government at Bombay. In 1852 the Ranes of Satari, in the Novas Conquistas revolted. In 1871 the native army in Goa mutinied and the king's own brother came from Lisbon to deal with the trouble and having done so disbanded the native army, which has never been reconstituted. But another outbreak among the troops took place in 1895 and the Ranes joining them the trouble was again not quieted until the arrival of another special expedition from Lisbon. The Ranes again broke out in 1901 and again in 1912, troops being again imported to deal with the last outbreak, which was only reported concluded in the summer of 1913.

Administration.

The Lisbon Government by Decree No. 3266, dated 27th July 1917, enacted new rules regarding the administration of Portuguese India under an Organic Charter (Carta Organica) in force since 1st July 1919.

As the principal organ of administration next to the Governor-General, and in collaboration with him, is working a council composed of official and elected members.

The official members are:—the Governor-General, president; the Chief Secretary; the Attorney-General; the Director of Public Works the Director of Finances; the Head of Marine Department; the Head of the Military Department; the Chief Health Officer; the Director of Agriculture and Forests and the Director of Customs.

The elected members are:—One representative of each of the districts of the New Conquests (Novas Conquestas) and one of the districts Daman and Diu, elected in the same way; one citizen elected by the Commercial and Industrial Associations; one citizen elected by 90 highest tax payers; one citizen elected by the Associations of Agriculture and of Land owners; one citizen elected by the Attorneys of the Communities and one citizen elected by the Associations of Class.

Under the Presidency of the Governor of each district there is District Council, which in Goa is composed of—the Chief Secretary, President; the Attorney General's Delegate at the Civil Court of the Islands; the Deputy Chief Health Officer; the Engineer next to the Director of Public Works; the Deputy Director of Finances; the Chairman of the Municipal Corporation of the Islands; one member elected by the Commercial and Industrial Associations of the district; one member elected by the 60 highest tax payers of Goa; one member elected by the Associations of Landowners and Farmers of the District and one member advocates elected by the Governor's Council among the legally qualified.

At Daman and Diu the corresponding body is composed of the local Governor, as President, the Delegate of the Attorney General, the Chief of the Public Works Department, the Health Officer, the Financial Director of the district, the Chairman of the Municipal Corporation, two members elected by 40 highest tax payers of the District and one member elected by the Merchants, Industrialists and Farmers of the district.

DAMAN.

The settlement of Daman lies at the entrance to the Gulf of Cambay, about 100 miles north of Bombay. It is composed of two portions, namely, Daman proper, lying on the coast, and the detached pargana of Nagar Aveli, separated from it by a narrow strip of British territory and bisected by the B. B. & C. I. Railway. Daman proper contains an area of 22 square miles and 26 villages and has a population (1910) of 18,300. Nagar Aveli has an area of 60 square miles and a population (1910) of 29,020. The town of Daman was sacked by the Portuguese in 1531, rebuilt by the natives and retaken by the Portuguese in 1558, when they made it one of their permanent establishments in India. They converted the mosque into a church and have since built eight other places of worship. Of the total population the number of Christians is 1,586. The number of houses is 8,971, according to the same census. The native Christians adopt the European costume, some of the women dressing themselves after the present European fashion, and others following the old style of petticoat and mantle once prevalent in Spain and Portugal.

The soil of the settlement is moist and fertile, especially in the pargana of Nagar Aveli,

Under the provisions of the above quoted Decree is also officiating in the capital of Portuguese India a special tribunal to take cognizance and decide all litigious administrative matters, fiscal questions and accounts. It is named *Tribunal do Contencioso e de Contas* and is composed of the Chief Justice, as President, two High Court Judges, the Chief Secretary and the citizens who are not government officers nor belong to the administration, bodies of corporations, whether they may be or may not be on actual duty, elected by the Governor's Council, two of whom are advocates and the third a merchant, industrialist or landowner or a highest tax payer. In the decision of matters of accounts the Director of Finances also sits on the special tribunal.

Under the presidency of the Governor-General the following bodies are also working:—

Technical Council of Public Works.—Its members are all engineers on permanent duty in the head office, a military officer of highest rank in the army or navy, the Director of Finances, the Attorney-General, the Chief Health Officer and a Secretary being a clerk of the Public Works Department appointed by the Director of Public Works.

Council of Public Instruction.—This is composed of three members appointed by Government and six elected among the Professors, there being one elected by the Medical College of Nova-Goa, two by the Lyceum of Nova-Goa, one by the Commercial Institute, one by the Normal School and one by the Corporation of the Professors of Primary Instruction.

but despite the ease of cultivation only one-twentieth part of the territory is under tillage. The principal crops are rice, wheat, the inferior cereals of Gujarat and tobacco. The settlement contains no minerals. There are stately forests in Nagar Aveli, and about two-thirds of them consist of teak, but the forests are not conserved and the extent of land covered by each kind of timber has not been determined. Before the decline of Portuguese power in the East, Daman carried on an extensive commerce; especially with the east coast of Africa. In those days it was noted for its dyeing and weaving.

The territory forms for administrative purposes a single district and has a Municipal Chamber and Corporation. It is ruled by a Governor invested with both civil and military functions, subordinate to the Governor-General of Goa. The judicial department is administered by a judge, with an establishment composed of a delegate of the Attorney-General and two clerks. In Nagar Aveli the greater part of the soil is the property of the Government, from whom the cultivators hold their tenures direct. A tax is levied on all lands, whether alienated or the property of the State. The chief sources of revenue are land-tax, forests, excise and customs duties.

DIU.

Diu is an island lying off the southern extremity of the Kathiawar Peninsula, from which it is separated by a narrow channel through a considerable swamp. It is composed of three portions, namely, Diu proper (island), the village of Gogla, on the Peninsula, separated by the channel, and the fortress of Simbor, about 5 miles west of the island. It has a small but excellent harbour, where vessels can safely ride at anchor in two fathoms of water and owing to the great advantages which its position offers for trade with Arabia and the Persian Gulf, the Portuguese were fired at an early period with a desire to obtain possession

of it. This they gained, first by treaty with the Sultan of Gujarat and then by force of arms. Diu became opulent and famous for its commerce. It has now dwindled into insignificance. The extreme length of the island is about seven miles and its breadth, from north to south, two miles. The area is 20 square miles. The population of the town of Diu, from which the island takes its name, is said to have been 50,000 in the days of its commercial prosperity. The total population of the island, according to the census of 1910, is 14,170, of whom 271 were Christians.

FRENCH POSSESSIONS.

The French possessions in India comprise five Settlements, with certain dependent lodges, or plots. They aggregate 203 square miles, and had a total population in 1912 of 282,386. The first French expedition into Indian waters, with a view to open up commercial relations, was attempted in 1603. It was undertaken by private merchants at Rouen, but it failed, as also did several similar attempts which followed. In 1642 Cardinal Richelieu founded the first *Campagne d'Orient*, but its efforts met with no success. Colbert reconstituted the Company on a larger basis in 1664, granting exemption from taxes and a monopoly of the Indian trade for fifty years. After having twice attempted, without success, to establish itself in Madagascar, Colbert's Company again took up the idea of direct trade with India and its President, Caron, founded in 1668 the *Comptoir*, or agency, at Surat. But on finding that city unsuited for a head establishment he seized the harbour of Trincomalee in Ceylon from the Dutch. The Dutch, however, speedily retook Trincomalee; and Caron, passing over to the Coromandel coast, in 1672 seized St. Thome, a Portuguese town adjoining Madras, which had for twelve years been in the possession of Holland. He was, however, compelled to restore it to the Dutch in 1674.

The ruin of the Company seemed impending when one of its agents, the celebrated Francois Martin, suddenly restored it. Rallying under him a handful of sixty Frenchmen, saved out of the wreck of the settlements at Trincomalee and St. Thome, he took up his abode at Pondicherry, then a small village, which he purchased in 1683 from the Raja of Gingee. He built fortifications, and a trade began to spring up; but he was unable to hold the town against the Dutch, who wrested it from him in 1693, and held it until it was res-

tored to the French by the Peace of Ryswick in 1697. Pondicherry became in this year, and has ever since remained, the most important of the French Settlements in India. Its foundation was contemporaneous with that of Calcutta. Like Calcutta, its site was purchased by a European Company from a native prince, and what Job Charnock was to Calcutta Francois Martin proved to Pondicherry. On its restitution to the French by the Peace of Ryswick in 1697, Martin was appointed Governor, and under his able management Pondicherry became an *entrepôt* of trade.

Chandernagar, in Lower Bengal, had been acquired by the French Company in 1688, by grant from the Delhi Emperor; Mahé, on the Malabar Coast, was obtained in 1725-6, under the government of M. Lenoir; Karikal, on the Coromandel Coast, under that of M. Duma, in 1739. Yanam, on the coast of the Northern Circars, was taken possession of in 1750, and formally ceded to the French two years later.

Administration.

The military command and administration-in-chief of the French possessions in India are vested in a Governor, whose residence is at Pondicherry. The office is at present held by Monsieur L. Gerbinis. He is assisted by a Chief Justice and by several "*Chefs de Service*" in the different administrative departments. In 1879 local councils and a council-general were established, the members being chosen by a sort of universal suffrage within the French territories. Seventeen Municipalities, or Communal Boards, were erected in 1907, namely, Pondicherry, Ariancoupam, Modeliarpeth, Oulgaret, Villenour, Tiroubouvane, Bahour and Nettapacam, for the establishment of Pondicherry; Karikal, Neravy, Nedoucadou, Tirunalar, Grande Aldée, Cotchéry, for the establishment

of Karikal, and also Chandernagar, Mahé and Yanam. On municipal boards natives are entitled to a proportion of the seats. Civil and criminal courts, courts of first instance and a court of appeal compose the judicial machinery. The army and establishments connected with the Governor and his staff at Pondicherry, and those of administrators at Chandernagar, Yanam, Mahe and Karikal, together with other headquarters charges, necessarily engross a large proportion of the revenue. All the state and dignity of an independent Government, with four dependent ones, have to be maintained. This is effected by rigid economy, and the prestige of the French Government is worthily maintained in the East. Pondicherry is also the scene of considerable religious pomp and missionary activity. It forms the seat of an Archbishop, with a body of priests for all French India; and of the Missions Etrangères, the successors of the Mission du Carnatic founded by the Jesuits in 1776. But the chief field of this mission lies outside the French Settlements, a large proportion of its Christians are British subjects and many of the churches are in British territory. The British rupee is the ordinary tender within French territories. A line of railway running *via* Villenour, from Pondicherry to Villupuram on the South Indian Railway, maintains communication with Madras and the rest of British India, and Karikal is linked to the same railway by the branch from Peralam. A Chamber of Commerce consisting of fifteen members, nine of them Europeans or persons

of European descent, was reorganised by a decree of 7th March, 1914. The capital, Pondicherry, is a very handsome town, and presents, especially from the sea, a striking appearance of French civilisation.

People and Trade.

The Settlements are represented in Parliament at Paris by one senator and one deputy. These are at the present time Mons. E. Flandin and Mons. P. Bluysen, respectively. There were in 1918, 61 primary schools and 3 colleges, all maintained by the Government, with 312 teachers and 9,676 pupils. Local revenue and expenditure (budget of 1919) Rs. 19,63,500. The principal crops are paddy, groundnut, and ragi. There are at Pondicherry 5 cotton mills, and at Chandernagar 1 jute mill; the cotton mills have, in all, 1,622 looms and 73,092 spindles, employing 12,020 persons. There are also at work one oil factory and a few oil presses for groundnuts, one ice factory, one ironworks and a cocotine factory. The chief exports from Pondicherry are oil seeds. At the ports of Pondicherry, Karikal, and Mahé in 1918 the imports amounted to 4,289,071 francs and the exports to 15,886,384 francs. At these three ports in 1918, 241 vessels entered and cleared. Tonnage 30,190T, 965K. Pondicherry is visited by French steamers sailing monthly between Colombo and Calcutta in connection with the Messageries Maritimes. The figures contained in this paragraph are the latest available and are corrected up to September 1918.

PONDICHERRY.

Pondicherry is the chief of the French Settlements in India and its capital is the headquarters of their Governor. It is situated on the Coromandel Coast, 105 miles from Madras by road and 122 by the Villupuram-Pondicherry branch of the South Indian Railway. The area of the Settlement is 115 square miles and its population in 1915 was 266,828. It consists of the four communes of Pondicherry. The Settlement was founded in 1674 under Francois Martin. In 1693 it was captured by the Dutch but was restored in 1699. It was besieged four times by the English. The first siege under Admiral Boscawen in 1748 was unsuccessful. The second, under Eyre Coote in 1761, resulted in the capture of the place, which was restored in 1765. It was again besieged and captured in 1778 by Sir Hector Munro, and the fortifications were demolished in 1779. The place was again restored in 1785 under the Treaty of Versailles of 1783. It was captured a fourth time by Colonel Braithwaite in 1793, and finally restored in 1816.

The Settlement comprises a number of isolated pieces of territory which are cut off from the main part and surrounded by the British District of South Arcot, except where they border on the sea. The Collector of

South Arcot is empowered to deal with ordinary correspondence with the French authorities on these and kindred matters, and in this capacity is styled the Special Agent. At Pondicherry itself is a British Consular Agent accredited to the French Government, who is usually an officer of the Indian Army. The town is compact, neat and clean, and is divided by a canal into two parts, the *Ville blanche* and the *Ville noire*. The *Ville blanche* has a European appearance, the streets being laid at right angles to one another with trees along their margins reminding the visitor of continental boulevards, and the houses being constructed with courtyards and embellished with green venetians. All the cross streets lead down to the shore, where a wide promenade facing the sea is again different from anything of its kind in British India. In the middle is a screw-pile pier, which serves, when ships touch at the port, as a point for the landing of cargo, and on holidays as a general promenade for the population. There is no real harbour at Pondicherry; ships lie at a distance of about a mile from the shore, and communication with them is conducted by the usual *masula* boats of this coast. Facing the shore end of the pier is a statue of the great Duplex, to whom the place and the French name owed so much.

CHANDERNAGAR.

Chandernagar is situated on the bank of the Hooghly, a short distance below Chinsura. Population (1915) 27,644. The town was permanently occupied by the French in 1688, though previously it had been temporarily occupied by them at a date given as 1672 or 1676. It did not, however, rise to any importance till the time of Dupleix. It changed hands between British and French various times during the Napoleonic wars and was finally restored to the French in 1816.

The former grandeur of Chandernagar has

disappeared, and at present it is little more than a quiet suburban town with little external trade. The railway station on the East Indian Railway is just outside French territory 22 miles from Calcutta (Howrah). The chief administrative officer is the Administrator who is subordinate to the Governor of the French Possessions. The chief public institution is the College Dupleix, formerly called St. Mary's Institution, founded in 1882 and under the direct control of the French Government.

KARIKAL.

Karikal lies on the Coromandel Coast between the Tanjore District of Madras and the Bay of Bengal. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles. It is governed by an Administrator subordinate to the Governor at Pondicherry. The population has in recent years rapidly decreased. In 1883 it was 93,055; in 1891, 70,526; in 1901, 56,595; in 1912, 56,579; and in 1915, 56,867; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only taluk in Tanjore District which has a higher density. Each of the three communes—namely, Karikal, La Grande Aldee, and Nedungadu—possesses a mayor and council. The members are all elected by universal suffrage, but in the muni-

cipality of Karikal half the number of seats are reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery, besides many smaller channels.

The capital of the settlement is situated on the north bank of the river Arasalar, about $1\frac{1}{2}$ miles from its mouth. It has a brisk trade in rice with Ceylon, and to a less extent with the Straits Settlements. It has no commerce with France, and very little with other French colonies. The port is merely an open roadstead, provided with a light-house 142 feet high, the light in which has a range of from 8 to 10 miles. In 1899 Karikal was connected with Peralem on the Tanjore District Board Railway. Karikal finally came into French possession on the settlement after 1815.

The Indian Frontiers.

A chapter on the frontiers of India at the present time is like a chapter on snakes in Iceland; on a large part of the north-west there is no frontier, nor will there be one until peace has been concluded with Turkey. That has been delayed from month to month, until now, more than a year after the armistice, although we are informed that the Allies have come to a general agreement, we are still without any news of the lines on which that agreement will be based.

The Indian frontier question has to be orientated afresh. All the old governing forces have disappeared, or been revolutionised. For generations Indian frontier policy was dominated by one idea, and one alone—it was fear of Russian expansion. All our movements on the North-West Frontier, and in regard to Persia and the Persian Gulf, were governed by one impulse—to arrest, if possible, the glacier-like advance of Russia towards India, whether that advance was through Afghanistan or through Persia and Seistan. These alarms and excursions were somewhat allayed by the conclusion of the Anglo-Russian agreement, but they were not dispersed; they continued to form the mainspring of what was known as the Forward School—the school of publicists and soldiers who were for ever clamouring for the pushing forward of the British frontier line.

Germany.—But the conclusion of the Anglo-Russian Agreement only changed the potential enemy from Russia to Germany. As soon as we were able, by the lightening of our insensate distrust of Russia, to examine the situation more tranquilly we saw that the real enemy was not Russia but Germany. Whilst Russia was advancing in Asia in a formless and sporadic manner, Germany was building her road to the East on deep foundations. The whole of her policy is summed up in the words Berlin-Byzantium-Baghdad—the great railway which was to carry German influence, along a railroad constructed and managed by Germans, from Berlin through Constantinople to the Persian Gulf and so to India. Indeed this project was one of the primary causes of the war, for Serbia blocked the way to a German line from Berlin to Baghdad, and there can be little doubt that appreciation of this fact exercised a great influence on the ex-Kaiser when he pledged the full might of Germany to Austria in her determination to deal severally with Serbia. And at one moment Germany hovered on the brink of success. The military collapse of Russia, and the close alliance which the Bolsheviks made with the Central Powers, opened the road to India, and German troops were pushed through the Caucasus to the Caspian, and Turkish troops, which were the instruments of Germany, advanced into Persia. This dream was dissipated when the smashing victories of General Allenby in Palestine struck the knell of German hopes and were the prelude to the entire collapse of Germany in the West.

Confusion.—Now in place of Russia and Germany we have on our frontiers nothing but confusion. The old Turkish Empire has ceased

to exist. None knows what will take its place. But it is certain that Great Britain will have to assume responsibility for the administration of Mesopotamia, for there is no other agency to keep order, and there is little order now beyond reach of the rifles of the Army of Occupation. People are beginning to count the cost, and faced with the heavy expenses of the war the British taxpayer is not contemplating with equanimity the burden of an unremunerative administration in Mesopotamia. The boundaries of our mandate have not been determined; but they are expected to stop short of Mosul. A very close agreement has been reached between Persia and Great Britain, under which British help in men and money will be given to assist the government of the Shah to restore and maintain order. The old North-West Frontier of India is now in a state of flux. The laborious work of Abdurrahman Khan and his successor Habibullah Khan in Afghanistan was brought to nought when in the early part of 1919 Habibullah Khan was foully murdered. The details of that crime are yet obscure. There is little doubt that it was inspired in the main by the fanatical and reactionary clique in the country against which Habibullah Khan had had to fight throughout his reign. This clique, led by the Amir's brother Nasrullah and the Afghan Commander-in-Chief, had striven by every means to involve Afghanistan in the war on the side of Turkey. They had failed, because of the tenacity with which Habibullah Khan had adhered, amid circumstances of great difficulty, to his pledge of neutrality. The military defeat of the Central Powers, and of Turkey, had proved the wisdom of Habibullah Khan's policy; if he had lived he would have been supreme in the State; there is little reason to doubt that he would have used his power to deal straightly with the enemies who had harassed him and would have launched on a policy to develop the resources and communications of Afghanistan. Realising this, the fanatical reactionaries had him done to death outside Jelalabad and proclaimed Nasrullah Khan Amir in his stead. But Afghan opinion revolted against the accession of Nasrullah Khan over the murdered body of his brother, and rallied round Amanullah Khan, the late Amir's third son, who was governor of Kabul, and installed him on the throne, throwing the assassins of Habibullah Khan into gaol.

New Afghan War.—But it was a thorny throne which the new Amir ascended. The turbulent Afghans had only with difficulty been held in leash by the iron rule of Abdurrahman Khan and his son. They were in no mood to settle down under their new ruler. And that ruler, like others before him, sought internal peace through a foreign war. The idea of a jihad—a religious war against the Christian peoples by Islam—had long been popular amongst an influential section of the Afghans. Turkish, German and Austrian emissaries sent to Kabul during the war were with difficulty controlled by the then Amir. This faction broke loose and carried the Amir with him amid the turmoil caused by the assassination and

the change of rule. Whether Amanullah Khan entertained any real hopes of success after the smashing defeat of Germany and Turkey is a mystery. He was certainly encouraged by the reports which reached him from his agents of the serious troubles in India which followed the passing of the Rowlatt Act and led to riots and loss of life in the Punjab and in Bombay. He undoubtedly desired to find an outlet for his restless soldiery and expected that the Government of India would be embarrassed by the internal disturbances and the war weariness of the army. But if so he choose his time with singular fatuity. An offensive which might have been embarrassing when we were at death grips with Germany, or when the Punjab disturbances were at their height, was futile when Germany was smashed and order reigned in the Punjab. However it was in these circumstances that Amanullah Khan issued his challenge; proclaimed a jihad; called upon the Frontier tribes to rise; and promised his soldiers the loot of Hindustan. The campaign was a miserable fiasco. A large British force moving swiftly out seized Dakka; the Afghan armies, severely bombed by aeroplanes and destitute of transport, melted away; and in a few weeks the Amir sued for peace. Peace was concluded, the Amir receiving the right to enter into negotiations with foreign powers direct, instead of through the Government of India, but forfeiting the right to the large subsidy which the Government of India had paid to his predecessors and agreeing to the final delimitation of the frontier.

The Frontier Tribes.—The Frontier tribes generally ignored the appeal of the Afghans to join in the jihad and remained quiescent. The exceptions were the Waziris against whom a long bill had been accumulating. This troublesome tribe, and especially the Mahsuds Waziris, had been rebellious for years, and had persisted in raids, murders and looting on our side of the Frontier. A reckoning with them was necessarily delayed during the war, but was taken in hand as soon as the Afghan peace was settled. Columns entered their country, destroying rebellious villages, and preparing the way for a permanent road, which like Wade's road through the Highlands of Scotland after Culloden, will permanently break the power of these rascally marauders. The Mahsuds resisted desperately, and the fighting was the most severe in the history of the Fron-

tier; but the opposition of the Mahsuds was steadily broken down, and the expedition had substantially done its work by the end of January.

Uncertainty.—The main results of these events is to leave this large section of the frontiers of India in a deplorable state of uncertainty. We have yet to learn the exact extent of the territory for which we shall have to assume responsibility in Mesopotamia. Whatever the frontier line, it will be subject to raids from the undisciplined peoples who will be our neighbours. The Anglo-Persian Agreement is full of promise, but the fulfilment of that promise is on the knees of the gods. None dares hazard an opinion as to the probable trend of events in Kabul; all look forward with apprehension to a long period of disturbance in Afghanistan. The tribes on our Frontier are comparatively quiet, but they must be affected by conditions in Afghanistan. Over all hangs the sinister menace of Bolshevism. As the year closed, the Bolsheviks seemed to be triumphing over their domestic enemies. Admiral Koltchak was in full retreat, with confusion in front and behind. General Denikin was in full retreat, with the Bolshevik armies rushing through his centre on Rostoff-on-Don. General Judenitch's dash for Petrograd had ended in hopeless failure. These successes placed the Bolsheviks in possession of the Orenburg-Tashkent railway and gave them easy access to Persia and to the northern provinces of Afghanistan. They announced their intention of using this favourable position for the spread of their power and principles throughout Asia. The future is therefore exceedingly unsatisfactory, and indicates that so far from Indian frontier responsibilities declining as the result of the war, they are likely to be more acute and anxious than ever.

The story of the long struggle for the mastery of Asia Minor, and of German intrigues, which has been briefly sketched here, was told in detail in earlier editions of *The Indian Year Book*. The conditions in the Persian Gulf are more permanent, so the essential features of the situation are recapitulated below. The new Anglo-Persian Agreement is also given in full, as well as the story of the assassination of the Amir of Afghanistan, of the war with Afghanistan, and of the troubles with the Frontier tribes. That is as far as it is possible now to go in an attempt to outline the conditions on the Indian frontiers.

THE PERSIAN GULF.

Our first appearances in the Persian Gulf was in connection with the long struggle for supremacy with the Portuguese, the French and the Dutch, who had established trading stations there. With the capture and destruction of the great entrepot which the Portuguese had established at Ormuz, and the supersession of the land route by the sea route, coupled with the appearance of anarchy in the interior, the importance of the Gulf declined. The Indian Government remained there primarily to preserve the peace, and this task it has since successfully performed. Piracy, which was as destructive

as the ravages of the Barbary corsairs, was stamped out, the Trucial Chiefs who occupy the Pirate Coast were gradually brought into close relations with the British Government, and the vessels of the Royal Navy have since kept watch and ward in the Gulf, whilst our Consuls have regulated the external affairs of the Arab rulers on the Arabian Coast.

A Policy of Abnegation.

In return for these services Great Britain has claimed no selfish advantages. The waters of the Gulf are as free to the navigation of other

flags as to the Red Ensign. The only territorial possession is the tiny station of Bassidu. Point after point has at one time or another been occupied by British troops. Muhammerah and the lower valley of the Karun valley were occupied during the war with Persia in 1857. Bushire was long held in the same connection, and still bears marks of our regime in the one tolerable road. The Island of Kharak was occupied from 1833 to 1842, and again in 1857. We had a military station at Kais during the Pirate wars, and a military and naval station at Kishm from 1820 to 1879. Jask was occupied as a cable station, but subsequently returned to Persia. The only surveys of the waters are British; the only cables are British; the few navigation marks are maintained by the British India Company, and two steamship services, a fast mail service and a slow trading service, are run by the same corporation. Apart from these direct acts, Great Britain might at any time have seized the whole Arabian Coast and the Persian shore. But in pursuit of a resolute self-denying ordinance she has kept the peace and demanded no reward.

European Intrusions.

Left to herself, Great Britain would desire no other policy. But the affairs of the Persian Gulf have passed into the region of international politics, and the past quarter of a century has witnessed successive efforts to turn the British position. Basing her interference on a treaty which gives her equal rights with Great Britain, France attempted to acquire a coaling station at Jissa, near Maskat, and subsequently obstructed British efforts to stamp out the slave trade, and the arms traffic, which was supplying weapons of precision to the tribes on our North-Western Frontier. Turkey, whether acting on her own volition, or as the *avant courier* of Germany, threatened the territory of the Sheikh of Bahrein, who is in special relations with us, and of the Sheikh of Koweit, who owns the only harbour which would make a Gulf terminus of the Baghdad Railway. Persia, stirred from Teheran, when Russian influence at the court of the Shah in Shah was supreme, established a foreign Customs service in the Gulf, and pressed our good friend, the Sheikh of Muhammerah. Russia and Germany sent heavily-subsidised merchant ships into the Gulf, in order to establish trading rights, and posted Consuls, where there was neither trade nor legitimate interest.

The Gulf and the Empire.

With these attacks there came also a closer appreciation of the bearing of the Persian Gulf on the defence of the Indian Empire. The strategic importance of these waters has been laid down by a writer of unchallenged authority and unbiassed mind. Writing in the *National Review*, Admiral Mahan said, "Concession in the Persian Gulf, whether by formal arrangement (with other Powers) or by neglect of the local commercial interests which now underlie political and military control, will imperil Great Britain's naval situation in the Farther East, her political position in India, her commercial interests in both, and the Imperial tie between herself and Australia."

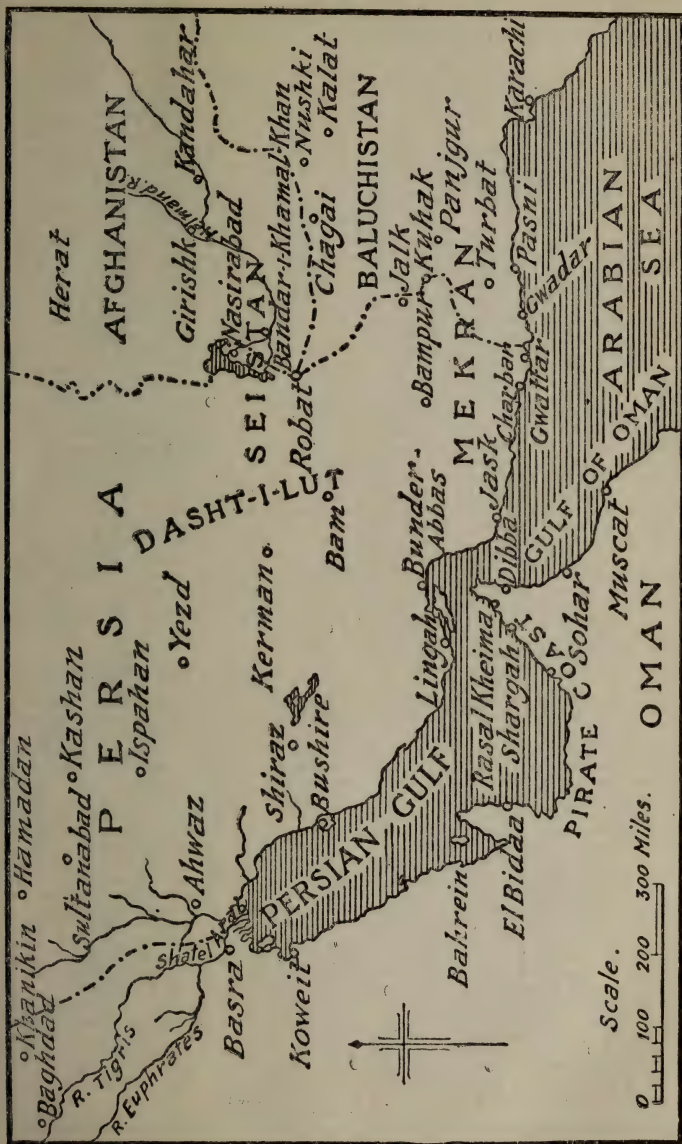
Following this, successive British Governments have made declarations of policy which are satisfactory, as far as words can go. Speaking in the House of Lords on May 5, 1903, Lord Lansdowne, then Secretary of State for Foreign Affairs, said "We (*i.e.*, His Majesty's Government) should regard the establishment of a naval base or of a fortified port in the Persian Gulf by any other Power as a very grave menace to British interests which we should certainly resist with all the means at our disposal." This declaration of policy has since been endorsed by Sir Edward Grey. But the question which arises is whether, in view of the intrusion of foreign Powers with aggressive designs, and the changing conditions on the littoral, the purely negative policy which has hitherto satisfied Great Britain will suffice. It is a hard fact but a true one, that if British authority disappeared to-morrow, it would leave no other relic than the Abadan oil refinery; a few consular buildings and the tradition of justice and fair dealing. That is a question which can best be considered after a brief survey of the various jurisdictions which are established in the Gulf.

Maskat.

Maskat, which is reached in about forty-eight hours from Karachi, is outside the Persian Gulf proper. It lies three hundred miles south of Cape Musandim, which is the real entrance to the Gulf, but its natural strength and historical prestige combine to make it inseparable from the politics of the Gulf, with which it has always been intimately associated.

The approach to Maskat is dramatic. The mail steamer gently feels her way along a coast more black and forbidding even than the iron-bound littoral of the Gulf of Suez, which is so familiar to the eastward passenger. Suddenly there appear on the coast the white houses of the trading settlement of Mattra, which lies to the north of Maskat. Then with a sharp turn the bow of the steamer passes under a gaunt rock painted with the names of the warships which have visited Maskat for half a century, and enters the landlocked harbour. Twin fortresses erected by the Portuguese command the heights which overlook the town; the town itself clusters on the shore and climbs the high ground behind it, and itself is shut off from the Arabian desert by a stout wall on the landward side. Formerly Maskat was part of a domain which embraced Zanzibar, and the Islands of Kishm and Larak, with Bunder Abbas on the Persian shore. Zanzibar was separated from it by agreement, and the Persians succeeded in establishing their authority over the possessions on the eastern shore.

The relations between Britain and Maskat have been intimate for a century and more. It was under British auspices that the separation between Zanzibar and Maskat was effected, the Sheikh accepted a British subsidy in return for the suppression of the slave trade and in 1892 sealed his dependence upon us by concluding a treaty pledging himself not to cede any part of his territory without our consent. Foreign intrigues with Maskat did not



commence until 1894, when the French, in pursuit of the pin-pricking policy through which they were avenging Egypt, and perhaps to assist Russia, established a consulate there. The Sultan was induced to cede to France a coaling station at Jissa, but this was such a clear violation of the Treaty of 1892 that it could not make good, and France had to accept the poor alternative of a leased depot. A more serious dispute arose over the use of the French flag to cover the slave trade. Native craft would secure the protection of the French flag by registering at Jibutli, and then defy the Sultan of Maskat, and they were enabled to traffic in slaves with impunity, inasmuch as there was rarely a French warship in the neighbourhood to search them. In April 1903 the trouble came to a head, and the French flagship *Infernet* was sent to Maskat to demand the release of dhows which had been arrested for a flagrant breach of the quarantine rules. This emphasised the necessity of a permanent settlement, and the question was referred to the Hague Tribunal, and a working compromise arranged. It was adjudged by the Hague Tribunal in 1905 that "after January 2, 1892, France was not entitled to authorise vessels belonging to subjects of H. H. the Sultan of Maskat to fly the French flag," except on condition that their "owners or fitters-out had established, or should establish, that they had been considered and treated by France as her protégés before the year 1863," though "owners of dhows who before 1892 had been authorised by France to fly the French flag retained this authorisation as long as France renewed it to the grantee." The conclusion of the *entente* with France put an end to these pinpricks, but one important issue remained outstanding until 1914. France claimed under the Anglo-French Treaty of 1862 freedom of trade with Maskat. There was carried on for years a lucrative **arms traffic** with the Gulf, rifles and ammunition being shipped from Europe to Maskat, and thence distributed all over the littoral and even to the North-West Frontier of India. The extent of this evil compelled the British Government to intervene, and elaborate arrangements were made to check the traffic by arresting the dhows carrying arms and by harrying the gunrunners ashore. In effect, the British warships had to witness the dumping of cargoes on the shore at Maskat, see them loaded into dhows, and trust to their own vigilance to arrest these consignments on the high seas. Prompted by the Colonial Party, the French Government refused to yield one jot of their treaty rights, in the hope that Great Britain would buy them out by surrenders at Gambia. The difficulty was largely overcome by the establishment of a bonded warehouse for arms at Maskat, where all consignments have to be deposited, and whence they are only issued under certificates of destination; and by an agreement negotiated in 1914 the French Government recognised the new Arms Traffic Regulations and abandoned the privileges and immunities secured to them by Treaty. Compensation was paid by the British Government to those French merchants whose stocks were rendered valueless by the Regulations.

In 1873 jurisdiction was given to the Vice-Admiralty Court at Aden and the consuls

within the dominions of Zanzibar, Maskat, and Madagascar for the more effectual suppression of the slave trade on the East Coast of Africa. By an Order-in-Council which came into force on August 1, 1914, the Act had been extended so as to comprise the Court established by the Persian Coast and Islands Order-in-Council, 1907. Thus the Consuls-General for Fars and the coasts and islands of the Persian Gulf will be able to enforce the suppression of the slave trade in that neighbourhood which was agreed to be desirable in a treaty made with the Persian Government so long ago as 1882.

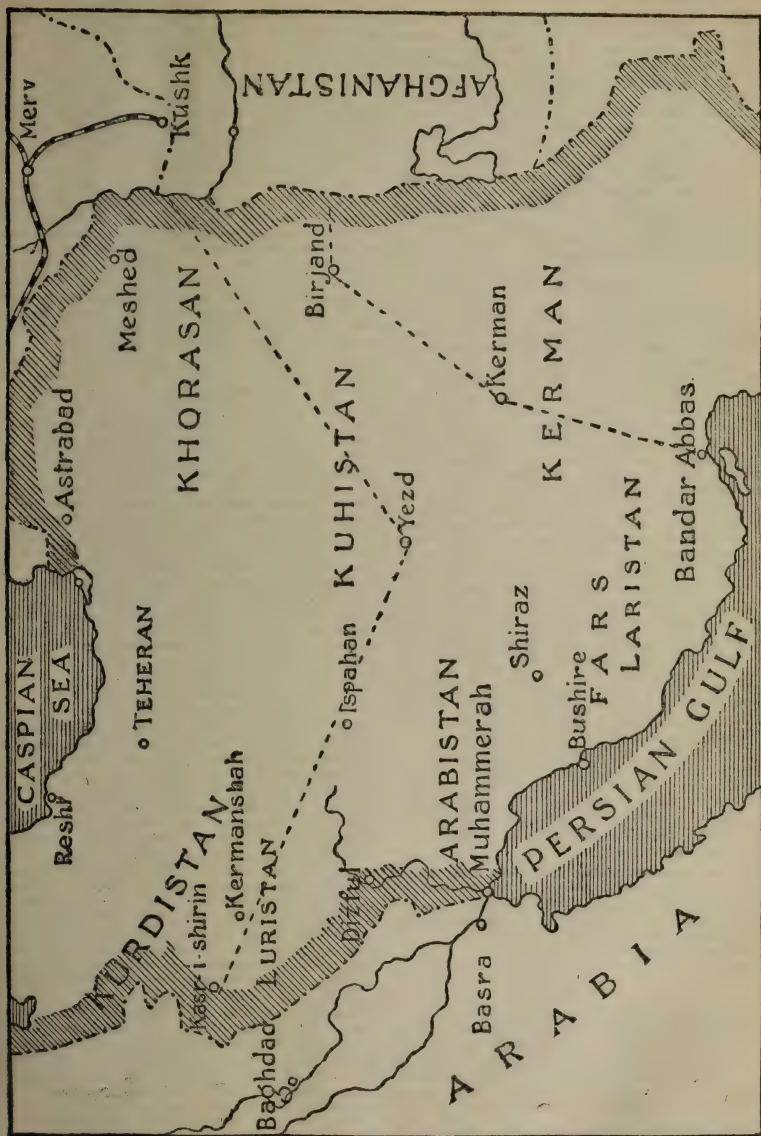
The Sultans have been in a difficult position for a good many years. They hold their capital of Maskat, the adjacent town of Matra, one or two other coast towns, and certain points in the interior, but as they possess few troops they find themselves unable to control the roving Beduin who wander at will over most of the State. When the Beduin wanted money they were wont to ride down to Matra, the centre of the date trade, and threaten to sack the town. The late Sultan, who died in 1913, was generally compelled to bribe them to go away. The rising which began in 1913 was a more serious affair. A Pretender, Sheikh Abdullah, seized the inland town of Semail, which stands in a spacious fertile valley where are grown most of the dates for which Maskat is famous. Great Britain has special interests at Maskat, based upon various documents, the chief of which is one drafted in 1891-92. The late Sultan asked us to protect him against the Pretender. We said we would protect his capital and coast, but could not send an expedition into the interior against the elusive Beduin. We sent Indian troops to Maskat.

British Consul: Major L. B. H. Hawarth.

Agency Surgeon, Vacant.

The Pirate Coast.

Turning Cape Musandim and entering the Gulf Proper, we pass the Pirate Coast, controlled by the six Trucial Chiefs. The ill-name of this territory has now ceased to have any meaning, but in the early days it had a very real relation to the actual conditions. The pirates were the boldest of their kind, and they did not hesitate to attack on occasion, and not always without success, the Company's ships of war. Large expeditions were fitted out to break their power, with such success that since 1820 no considerable punitive measures have been necessary. The Trucial Chiefs are bound to Great Britain by a series of engagements, beginning with 1806 and ending with the perpetual treaty of 1853 by which they bound themselves to avoid all hostilities at sea, and the subsequent treaty of 1873 by which they undertook to prohibit altogether the traffic in slaves. The relations of the Trucial Chiefs are controlled by the British Resident at Bushire, who visits the Pirate Coast every year on a tour of inspection. The German attempt to obtain a concession from the Sheikh of Shargarh has been mentioned. A more serious question arose in 1912 when a landing party from H. M. S. Fox, searching for contraband arms at Debai, was fired at by the resident Arabs and five men killed and nine wound-



ed. The Sheikh made ample amends to the British Resident, and submitted to a fine. There was at first the suspicion that this *emeute* arose from the spread of pan-Islamism on the coast, studiously fostered from Constantinople, and that it indicated a weakening respect for British authority. But fuller enquiries tended to show that it arose from an unfortunate series of misunderstandings. The commercial importance of the Pirate Coast is increasing through the rise of Debai. Formerly Lingah was the entrepot for this trade, but the exactions of the Belgian Customs officials in the employ of Persia has driven this traffic from Lingah to Debai. The Trucial Chiefs are—Debai, Abu Thabee, Shargah, Ajman, Um-al-Gawain and Ras-el-Kheyman.

Bahrein.

North of the Pirate Coast lies the little Archipelago which forms the chiefship of the Sheikh of Bahrein. Of this group of islands only those of Bahrein and Maharak are of any size, but their importance is out of all proportion to their extent. This is the great centre of the Gulf pearl fishery, which, in a good year, may be worth half a million pounds sterling. The anchorage is wretched, and at certain states of the tide ships have to lie four miles from the shore, which is not even approachable by boats, and passengers, mails and cargo have to be landed in on the donkeys for which Bahrein is famous. But this notwithstanding the trade of the port is valued at over a million and a quarter sterling, and the customs revenue, which amounts to some eighty thousand pounds, makes the Sheikh the richest ruler in the Gulf.

Bahrein has passed through more than usually chequered experiences. Not the least formidable of these are the efforts of the Turks to threaten its independence. These took definite form in the third quarter of the last century, when Midhat Pasha, Vali of Basra, occupied the promontory of El Kater, as well as El Katif, over against Bahrein, and converted El Hasa into a district. The war with Russia put an end to these designs, but they were revived and the Turks at El Kater were a menace to Bahrein until the war diverted Turkish activities. The Sheikh by the treaty of 1861 entered into special engagements with the British Government, by whom his rights are guaranteed.

In the neighbourhood of Bahrein is the vast burying ground which has hitherto baffled archaeologists. The generally accepted theory is that they are relics of the Phœnicians, who are known to have traded in these waters.

Political Agent, Vacant.

Koweit.

In the north-west corner of the Gulf lies the port which has made more stir than any place of similar size in the world. The importance of Koweit lies solely in the fact that it is the one possible Gulf terminus of the Baghdad Railway. This is no new discovery, for when the Euphrates Valley Railway was under discussion, General Chesney selected it under the alternative name of the Grane—so called from the resemblance of the formation of the Bay to

a pair of horns—as the sea terminus of the line. Nowhere else would Koweit be called a good or a promising port. The Bay is 20 miles deep and 5 miles broad, but so shallow that heavy expense would have to be incurred to render it suitable for modern ocean-going steamers. It is sheltered from all but the westerly winds, and the clean thriving town is peopled by some 20,000 inhabitants, chiefly dependent on the sea, for the mariners of Koweit are noted for their boldness and hardihood.

The political status of Koweit would baffle the ingenuity of the international jurist to find a definition. Nominally the Sheikh owns allegiance to the Sultan of Turkey, from whom he has accepted the honorary title of Kaimakam, or Local Governor. In practice, he has always been independent. In 1898, the Turks attempted to convert their nominal sovereignty into something more actual; but the Sheikh Mubarak approached the British Government and placed his interests under their special protection. When, however, the German surveyors earmarked Koweit for the terminus of their line, the position of the Sheikh was indirectly attacked. To the north of Koweit there is a deep indentation in the lowlying shore chiefly occupied by the swampy island of Bubyān. Here a long narrow channel runs to Umm Khasa, the Khor Abdulla. It is sometimes held to be an alternative to Koweit as a Gulf Terminus, and with a view to earmarking it, the Turks have established military posts at Umm Khasa and on Bubyān Island. Threatened by domestic feuds, raids by sea, and attack by land, Sheikh Mubarak, with a British backing, has fended off all assaults on his position, and with realisation of the fact that Basra must, in any circumstances, be the commercial terminus of the Baghdad Railway, the importance of Koweit has tended to recede.

Political Agent, Vacant.

Muhammerah.

On the opposite side of the entrance to the Shatt-el-Arab lie the territories of a Sheikh who stands to the Persian Government in much the same relation as does the Sheikh of Koweit to the Government of Turkey—Sheikh Khazzal of Muhammerah. Nominally, he is subject to Teheran, on whose behalf he governs his territories as Governor; in practice he is more like a semi-independent vassal. In personal characteristics, too, Sheikh Khazzal has much in common with Mubarak; he has proved that he possesses many of the qualities of an administrator, and has resisted Persian encroachments on his authority in all directions save one—despite his strong antipathy to the agents of a centralised government, the Persians have installed an officer of their Belgian Customs service at Muhammerah. The town, favourably situated near the mouth of the Karun River, has grown in importance since the opening of the Karun River route to trade through the enterprise of Messrs. Lynch Brothers. This route provides the shortest passage to Ispahan and the central tableland, and already competes with the older route by way of Bushire and Shiraz. This importance has grown since the Anglo-Persian Oil Company established refineries at Muhammerah for the

oil which they win in the rich fields which they have tapped near Ahwaz. Its importance will be still further accentuated, if the scheme for a railway to Khorremabad by way of Dizful matures. A concession for a road by this route has long been held by a British Company, and surveys for a railway are being made. There is a tacit assurance from the Persian Government that if a practicable scheme is put forward, they will facilitate the work. Such a line, meeting the projected branch from Teheran to Khannikin, would intercept the trade of Central Persia and make Muhammerah the principal outlet for the commerce of the country. Sheikh Khazzal is believed to have formed an excellent working understanding with his brother chief across the water, and as the head of the great Kaab tribe he is no mean power in south-western Persia.

Vice-Consul at Ahwaz, E. G. B. Peel.

Consul for Arabistan (Muhammerah), Asstt. Surgeon C. H. Lincoln.

Basra.

In a sense Basra and Turkish Arabistan can hardly be said to come within the scope of the frontiers of India, yet they are so indissolubly associated with the politics of the Gulf that they must be considered in relation thereto. Basra is the inevitable sea terminus of the Baghdad Railway. It stands on the Shatt-el-Arab, sixty miles from its mouth, favourably situated to receive the whole water-borne trade of the Tigris and Euphrates Rivers. This is already considerable, although Turkish obstruction has closed the Euphrates to navigation, as well as the Tigris above Baghdad—between Basra and Baghdad there were two services of river steamers, one controlled by Messrs. Lynch Brothers and the other by a Turkish Company. The local traffic is valuable, for the richness of the date groves on either side of the Shatt-el-Arab is indescribable, there is a considerable entrepot traffic, whilst Basra is the port of entry for Baghdad and for the trade with Persia, which follows the caravan route *via* Kerman-shah and Hamadan. When the Baghdad Railway is open, Basra must absorb the whole trade of the eastern zone, that is the trade which finds an easier outlet on the east than at Alexandretta on the Mediterranean. That is without taking account of the possibilities of the irrigation scheme prepared by Sir William Willcocks, which should revive the glories of ancient Mesopotamia, and make Arabistan another Egypt. Even now ocean-going steamers trade regularly with Basra and load grain in bulk from its wharves. The one obstacle to the development of the port is the bar at the entrance to the Shatt-el-Arab, where there are no more than ten feet of water at low tide, and where steamers drawing more than sixteen to eighteen feet have, even at high tide, to discharge part of their cargoes into lighters before making the river. The cost of dredging the bar would not be large, and that done a first class port is almost ready made at Basra. Nothing can prevent it from becoming the port of the Middle East, and since the British occupation of the port much has been done to increase the facilities that it offers alike for river and ocean trade.

The Persian Shore.

The Persian shore presents fewer points of permanent interest. The importance of Bushire is administrative rather than commercial. It is the headquarters of Persian authority, the residence of the British Resident, and the centre of many foreign consuls. It is also the main entrepot for the trade of Shiraz, and competes for that of Ispahan. But the anchorage is wretched and dangerous, the road to Shiraz passes over the notorious kotals which preclude the idea of rail connection, and if ever a railway to the central tableland is opened, the commercial value of Bushire will dwindle to insignificance. Further south lies Lingah, reputed to be the prettiest port on the Persian coast, but its trade is being diverted to Debal on the Pirate Coast. In the narrow channel which forms the entrance to the Gulf from the Arabian Sea is Bunder Abbas. Here we are at the key of the Gulf. Bunder Abbas is of some importance as the outlet for the trade of Kerman and Yezd. It is of still more importance as a possible naval base. To the west of the town between the Island of Kishm and the mainland, lie the Clarence Straits which narrow until they are less than three miles in width, and yet contain abundance of water. Here, according to sound naval opinion, there is the possibility of creating a naval base which would command the Gulf. The great obstacle is the climate, which is one of the worst in the world. On the opposite shore, under the shadow of Cape Musandim, lies another sheltered deep-water anchorage, Elphinstone's Inlet, where the climate conditions are equally vile. But between these two points there is the possibility of controlling the Gulf just as Gibraltar controls the Mediterranean. For many years Bunder Abbas seemed large in public discussions as the possible warm water port for which Russia was seeking. Now it has reappeared in connection with the Trans-Persian railway. It is understood that the British Admiralty insist on that line meeting the sea at Bunder Abbas, where it would enter the British zone, and whence, along the Coast of Mekran, it would be commanded from the sea. The Russian concessionaires wish the line to strike the sea much further east either at the actual British frontier, Gwettur, or at Chahbar, where there are believed to be the makings of a deep-water port. So far the project has not passed beyond the stage of academic discussion (*q. v.* Railways to India). On the Mekran coast, there is the cable station of Jask, and the possible port of Chahbar. The British Government temporarily occupied Bushire in 1915 in circumstances narrated in Persia (*q. v.*)

Political Resident in the Persian Gulf, Bt.-Lt.-Col. A. T. Wilson, C. M. G., C.I.E., D.S.O. (Acting).

Deputy Political Resident, Lt.-Col. A. P. Trevor, C.I.E.

Residency Surgeon at Bushire—Vacant.

Consul at Bunder Abbas and Assistant to the Resident, G. A. G. Mungavin (Offg.).

PERSIA.

The concentration of public attention on the Persian Gulf has been allowed to obscure the frontier importance of Seistan. Yet it has been a serious preoccupation with the Government of India. Seistan lies midway north and south between the point where the frontiers of Russia, Persia and Afghanistan meet at Zulfikar and that where the frontiers of Persia and of our Indian Empire meet on the open sea at Gwattur. It marches on its eastern border with Afghanistan and with Baluchistan, it commands the valley of the Helmand, and with it the road from Herat to Kandahar, and its immense resources as a wheat-producing region have been only partly developed under Persian misrule. It offers to an aggressive rival, an admirable strategic base for future military operations; it is also midway athwart the track of the shortest line which could be built to connect the Trans-Caspian Railway with the Indian Ocean, and if and when the line from Askabad to Meshed were built, the temptation to extend it through Seistan would be strong. Whilst the gaze of the British was concentrated on the North-West Frontier, and to possible lines of advance through Kandahar to Quetta, and through Kabul to Peshawar, there can be little doubt that Russian attention was directed to a more leisurely movement through Seistan, if the day came when she moved her armies against India.

Anglo-Russian Agreement.

Whether with this purpose or not, Russian intrigue was particularly active in Seistan in the early years of the century. Having Rus-

sian agents moved into Seistan; and through the agency of the Belgian Customs officials, "scientific missions" and an irritating plague cordon, sought to establish influence, and to stifle the British trade which was gradually being built up by way of Nushki. These efforts died down before the presence of the McMahon mission, which, in pursuance of Treaty rights, was demarcating the boundary between Persia and Afghanistan, with special reference to the distribution of the waters of the Helmand. They finally ceased with the conclusion of the Anglo-Russian Agreement. Since then the international importance of Seistan has waned. Whether on account of the Agreement, which bars the line of advance through Seistan, or because of the discovery of an easier route, we cannot determine, but Russian activities in railway construction were later diverted to the Trans-Persian route, which would take a direct line through Teheran from Baku, and meet the Arabian Sea at Bunder Abbas or Chahbar.

The natural conditions which give to Seistan this strategic importance persist. Meantime British influence is being consolidated through the Seistan trade route. The distance from Quetta to the Seistan border at Killa Robat is 465 miles, most of it dead level, and it has now been provided with fortified posts, dak bungalows, wells, and all facilities for caravan traffic. The railway has been pushed out from Spezand, on the Bolan Railway to Nushki, so as to provide a better starting point for the caravans than Quetta. This railway has since been extended to the Persian border.

NEW AGREEMENTS WITH PERSIA.

The condition of Persia during the war was one of helplessness. At the outset of hostilities German agents, who had carefully prepared the ground, raised the lawless element and spread over a large part of the country. They were expelled by the Russians, when they advanced from Kasvin to the neighbourhood of Baghdad. Later, on the fall of Kut, Turkish troops overran the western provinces; these had to beat a hasty retreat when the victories of General Maude took British arms to Baghdad. On the final collapse of Russia, the Turks again entered the country from the Caucasus, but before they could do much damage the crushing defeat of Turkey put an end to their activities. Simultaneously the efforts of the South Persian Rifles, organised with the co-operation of Great Britain, and of the expedition which passed through Persia to the Black Sea was responsible for restoring some semblance of order. In all these developments the Persian Government took little or no part; it was the sport of events which it could not effectively control or influence.

The cessation of hostilities created a new and perplexing situation in Persia. Thanks to Russian and British aid, that country had escaped with the bulk of her territories intact, but her administration remained weak and ineffective and offered an easy mark to Bol-

shevist intrigues which were clearly leading towards a war of conquest in Persia. With Russia in a state of chaos, Great Britain was the only country to which Persia could turn for aid, the only great power whose frontiers marched with those of Persia. What is more, open statements of policy had been made of a kind likely to reassure Persian statesmen in regard to the intentions of Great Britain. "We desire Persia to remain neutral during the War," said Lord Curzon in 1918, "and to retain its complete independence after the War." It was natural then that Persia should seek British assistance and the despatch of Sir Percy Cox to Teheran as British Minister, at the end of 1918, was the first step in negotiations of which the fruit was seen in August of the following year when it was announced that two agreements had been concluded with Persia. Of these one is political and aims at binding more closely Anglo-Persian relations and promoting the progress and prosperity of Persia. To these ends Great Britain agrees,

To respect Persian integrity;

To supply experts for Persian administration;

To supply officers and equipment for a Persian force for the maintenance of order;

Railway Position in the Middle East.



To provide a loan for these purposes ;

To co-operate with the Persian Government in railway construction and other forms of transport.

Both Governments agree to the appointment of a joint committee to examine and revise the Customs tariff.

The second agreement defines the terms and conditions on which the loan is to be made to Persia. The loan is for £2,000,000 at 7 per cent. redeemable in 20 years. It is secured on the revenues and Customs' receipts assigned for the repayment of the 1911 loan and should these be insufficient the Persian Government is to make good the necessary sums from other sources.

Following is the text of the-agreement :—

No. 1. Agreement between the Governments of Great Britain and Persia.

Preamble : In virtue of the close ties of friendship which have existed between the two Governments in the past and in the conviction that it is in the essential and mutual interests of both in future that these ties should be cemented, and that the progress and prosperity of Persia should be promoted to the utmost, it is hereby agreed between the Persian Government on the one hand, and His Britannic Majesty's Minister, acting on behalf of his Government, on the other, as follows :—

1. The British Government reiterate, in the most categorical manner, the undertakings which they have repeatedly given in the past to respect absolutely the independence and integrity of Persia.

2. The British Government will supply, at the cost of the Persian Government, the services of whatever expert advisers may, after consultation between the two Governments, be considered necessary for the several departments of the Persian Administration. These advisers shall be engaged on contracts and endowed with adequate powers, the nature of which shall be the matter of agreement between the Persian Government and the advisers.

3. The British Government will supply, at the cost of the Persian Government, such officers and such munitions and equipment of modern type as may be adjudged necessary by a joint commission of military experts, British and Persian, which shall assemble forthwith for the purpose of estimating the needs of Persia in respect of the formation of a uniform force which the Persian Government proposes to create for the establishment and preservation of order in the country and on its frontiers.

4. For the purpose of financing the reforms indicated in clauses 2 and 3 of this agreement, the British Government offer to provide or arrange a substantial loan for the Persian Government, for which adequate security shall be sought by the two Governments in consultation in the revenues of the Customs or other sources of income at the disposal of the Persian Government. Pending the completion of negotiations for such a loan the British Government will supply on account of it such funds as may be necessary for initiating the said reforms.

5. The British Government fully recognizing the urgent need which exists for the improvement of communications in Persia, with a view both to the extension of trade and the prevention of famine, are prepared to co-operate with the Persian Government for the encouragement of Anglo-Persian enterprise in this direction both by means of railway construction and other forms of transport ; subject always to the examination of the problems by experts and to agreement between the two Governments as to the particular projects which may be most necessary, practicable, and profitable.

6. The two Governments agree to the appointment forthwith of a joint Committee of experts for the examination and revision of the existing Customs Tariff with a view to its reconstruction on a basis calculated to accord with the legitimate interests of the country and to promote its prosperity.

Signed at Teheran, August 9, 1919.

No. 2. Agreement relating to Loan of £2,000,000, at 7 per cent. redeemable in Twenty Years.

Preamble : Contract between the British Government and the Persian Government with reference to an agreement concluded this day between the said Government. It is agreed as follows :—

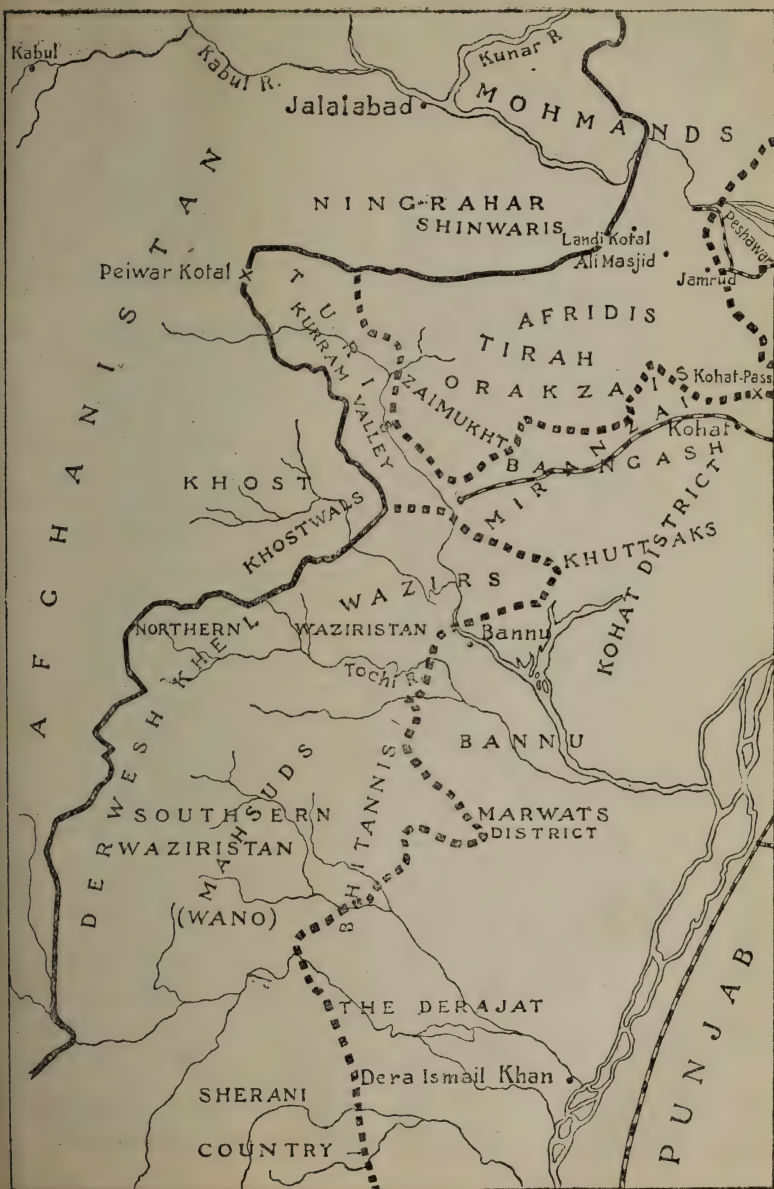
Article 1. The British Government grant a loan of £2,000,000 sterling to the Persian Government, to be paid to the Persian Government as required in such instalments and at such dates as may be indicated by the Persian Government, after the British Financial Adviser shall have taken up the duties of his office at Teheran, as provided for in the aforesaid agreement.

Article 2. The Persian Government undertakes to pay interest monthly at the rate of 7 per cent. per annum upon sums advanced in accordance with Article 1 up to March 20, 1921, and thereafter to pay monthly such amount as will suffice to liquidate the principal sum and interest thereon at 7 per cent. per annum in 20 years.

Article 3. All the revenues and Customs receipts assigned in virtue of the contract of May 8, 1911 [See No. 3], for the repayment of the loan of £1,250,000 are assigned for the repayment of the present loan with continuity of all conditions stipulated in the said contract and with priority over all debts other than the 1911 loan and subsequent advances made by the British Government. In case of insufficiency of the receipts indicated above the Persian Government undertakes to make good the necessary sums from other resources, and for this purpose the Persian Government hereby assigns to the service of the present loan, and of the other advances above mentioned, in priority and with continuity of conditions stipulated in the aforesaid contract, the Customs receipts of all other regions, in so far as these receipts are or shall be at its disposal.

Article 4. The Persian Government will have the right of repayment of the present loan at any date out of the proceeds of any British loan which it may contract for.

Signed at Teheran, August 9, 1919.



No. 3. Article 5 of Contract between the Persian Government and the Imperial Bank of Persia relating to the Persian Government Five per cent. Loan of £ 1,250,000 of May 8, 1911. (Included for reference).

5. The Imperial Government of Persia specially assigns to the service of the loan, and as a first charge thereon, subject only to prior charges amounting to £15,714 1s. 10d. per annum for three years, and £30,278 12s. 7d. per annum from the year 1913 to the year 1928, the full net. Customs receipts of every description which the Government now is, or at any time hereafter may be, entitled to collect and receive at all ports or places in the Persian Gulf, including Bushire, Bunder Abbas, Lingah, Mohammerah, and Ahwaz which receipts are hereby made payable to the Bank, and the Imperial Government of Persia hereby engages forthwith after receipt thereof to pay to the Bank all such Customs receipts as aforesaid without deduction other than for actual expenses of administration of the Customs of the said ports disbursed prior to the date of such payment.

(a) The Imperial Government of Persia undertakes that throughout the continuance of the loan all sums collected by the Customs Administration shall be paid to the Bank at the ports of collection or at its nearest branch, week by week for meeting the prior charges referred to above and for the service of the loan, and an account of such receipts shall be submitted to the Persian Government by the Bank at the end of each month.

(b) The Bank shall, out of the moneys so collected, pay the prior charges above mentioned, and the interest and sinking fund of the loan, and shall hold the surplus at the disposal of the Imperial Government of Persia.

(c) The Bank undertakes out of the moneys so received to pay on behalf of the Imperial Government of Persia the half-yearly coupon in London, and supervise the working of the sinking fund and service of the loan free of charges connected with the same.

(d) In the event of the Customs receipts of the above-mentioned ports for any three months falling short of the amount required for the prior charges and the service of the loan, either for interest or amortization, the Imperial Government of Persia binds itself to make good such deficiency from other sources of Government revenue, and further, should receipts from these sources fall below the amount required as above, the Persian Government hereby assigns for this purpose the revenue derived from the receipts of the telegraphs—this assignment to constitute a second charge on the said telegraph receipts up to the year 1928 after which the telegraph receipts will be free.

The following correspondence was also published:—

Sir P. Cox to His Highness Vossug-ed-Dowleh.

British Legation, Teheran, August 9, 1919.

Your Highness,—I trust your Highness has been able during your successful direction of affairs of the Persian State, to convince yourself that his Britannic Majesty's Government have always endeavoured to support to the utmost the efforts of your Highness's Cabinet on the one hand to restore order and security in the interior of the country, and on the other to maintain a policy of close co-operation between the Persian and British Governments.

As further evidence of the good will by which the Cabinet of London is inspired, I am now authorized to inform your Highness that, in the event of the agreement regarding projects of reforms which your Government contemplates introducing in Persia being concluded, his Britannic Majesty's Government will be prepared in due course to co-operate with the Persian Government with a view to the realization of the following desiderata:—

1. The revision of the treaties actually in force between the two Powers.
2. The claim of Persia to compensation for material damage suffered at the hands of other belligerents.
3. The rectification of the frontier of Persia at the points where it is agreed upon by the parties to be justifiable.

The precise manner, time and means to be chosen for pursuing these aims shall be discussed, as soon as practicable, by the two Governments.

(Signed) P. Z. COX.

Sir P. Cox to His Highness Vossug-ed-Dowleh.

British Legation, Teheran, August 9, 1919.

Your Highness,—With reference to the second desideratum indicated in my previous letter of to-day's date, it is understood and agreed between the two Governments reciprocally that, on the one hand his Majesty's Government will not claim from the Government of his Majesty the Shah the cost of the maintenance of British troops which his Majesty's Government were obliged to send to Persia owing to Persia's want of power to defend her neutrality, and that on the other hand the Persian Government will not claim from the British Government an indemnity for any damage which may have been caused by the said troops during their presence in Persian territory.

It is to be understood, however, that this agreement of the two parties does not in any way affect the claims of individuals and private institutions, which will be dealt with independently.

A note from your Highness informing me that you accept this position on behalf of the Persian Government will suffice to record the agreement of the two Governments on this subject.

(Signed) P. Z. COX.

H. B. M.'s Consul General and Agent of the Government of India in Khorasan:—Lieut.-Colonel T. C. Foule.

H. B. M.'s Consul in Sistan and Kain:—B. J. Gould.

Medical Officer and Vice-Consul:—Major D. Heron, I.M.S.

THE INDEPENDENT TERRITORY.

There yet remains a small part of British India where the King's writ does not run. Under what is called the Durand Agreement with the Amir of Afghanistan, the boundary between India and Afghanistan was settled, and it was delimited in 1903 except for a small section which was delimited after the Afghan War in 1919. But the Government of India have never occupied up to the border. Between the administered territory and the Durand line there lies a belt of territory of varying width, extending from the Gomal Pass in the south, to Kashmir in the north; this is generically known as the Independent Territory. Its future is the keynote of the interminable discussions of frontier policy for nearly half a century.

This is a country of deep valleys and secluded glens, which nature has fenced in with almost inaccessible mountains. It is peopled with wild tribes of mysterious origin, in whom Afghan, Tartar, Turkoman, Persian, Indian, Arab and Jewish intermingle. They had lived their own lives for centuries, with little intercourse even amongst themselves, and as Sir Valentine Chirol truly said "the only bond that ever could unite them in common action was the bond of Islam." It is impossible to understand the Frontier problem unless two facts are steadily borne in mind. The strongest sentiment amongst these strange people is the desire to be left alone. They value their independence much more than their lives. The other factor is that the country does not suffice even in good years to maintain the population. They must find the means of subsistence outside, either in trade, by service in the Indian Army or in the Frontier Militia; or else in the outlet which hill-men all the world over have utilised from time immemorial, the raiding of the wealthier and more peaceful population of the Plains.

Frontier Policy.

The policy of the Government of India toward the Independent Territory has ebbed and flowed in a remarkable degree. It has fluctuated between the Forward School, which would occupy the frontier up to the confines of Afghanistan, and the school of Masterly Inactivity, which would leave the tribesmen entirely to their own resources, punishing them only when they raided British territory. Behind both the policies lay the menace of a Russian invasion, and that coloured our frontier policy until the Anglo-Russian Agreement. This induced what was called Hit and Retire tactics; in the half century which ended in 1897 there were nearly a score of punitive expeditions, each one of which left behind a legacy of distrust, and which brought no permanent improvement in its train. The fruit of the suspicion thus engendered was seen in 1897. Then the whole Frontier, from the Malakand to the Gomal, was ablaze. The extent of this rising and the magnitude of the military measures which were taken to meet it compelled a consideration of the whole position. The broad outlines of the new policy were laid down in a despatch from the Secre-

tary of State for India, which prescribed for the Government the "limitation of your interference with the tribes, so as to avoid the extension of administrative control over tribal territory." It fell to Lord Curzon to give effect to this policy. The main foundations of his action were to exercise over the tribes the political influence requisite to secure our imperial interests, to pay them subsidies for the performance of specific duties, but to respect their tribal independence and leave them, as far as possible, free to govern themselves according to their own traditions and to follow their own inherited habits of life without let or hindrance.

New Province.

As a first step Lord Curzon took the control of the tribes under the direct supervision of the Government of India. Up to this point they had been in charge of the Government of the Punjab, a province whose head is busied with many other concerns. Lord Curzon created in 1901, the North-West Frontier Province, and placed it in charge of a Chief Commissioner with an intimate frontier experience, directly subordinate to the Government of India. This was a revival of a scheme prepared by Lord Lytton in 1877, and often considered afterwards, but which had slipped for lack of driving power. Next Lord Curzon withdrew the regular troops so far as possible from the advanced posts, and placed these fortalices in charge of tribal levies, officered by a handful of British officers. The most successful of these is the Khyber Rifles, which steadfastly kept the peace of that historic Pass until 1919. At the same time the regular troops were cantoned in places whence they could quickly move to any danger point, and these bases were connected with the Indian Railway system. In pursuance of this policy frontier railways were run out to Dargai, and a narrow-gauge line, since converted to the broad-gauge, was constructed from Kushalgarh to Kohat at the entrance of the Kohat Pass, and to Thal at the mouth of the Kurram Valley. These railways have been completed by lines to Tonk and Bannu. By this means the striking power of the regular forces was greatly increased. Nor was the policy of economic development neglected. The railways gave a powerful stimulus to trade, and the Lower Swat Canal converted fractious tribesmen into successful agriculturists. This policy of economic development is receiving a great development through the completion of the Upper Swat Canal (*q. v.* Irrigation). Now it is completed there are other works awaiting attention.

Greater Peace.

For many this policy was completely justified by results. During Lord Curzon's Viceroyalty there was no frontier expedition. The recalcitrancy of the Mahsud Waziris necessitated punitive measures, but they took the form of a blockade. Critics have declared that the blockade was scarcely distinguishable from an expedition, but that is a secondary matter. It was not until 1908 that the peace

of the border was directly disturbed, and then the continued recalcitrancy of the Zakka Khel sept of the great Afridi tribe compelled the Government to take action. General Willcocks, moving swiftly down the Chura Pass, and Colonel Roos-Keppel taking the Khyber Rifles down the Bazar Valley inflicted such condign punishment on them that they were glad to accept terms of peace negotiated by the main Afridi tribe. A month later, action was necessary against the Mohmands. In this case the rebellious tribesmen were actively supported by Afghan levies, assembled and fitted out in Afghan territory at Lalpura. Two brigades entered their country and defeated them. There was a diversion when lashkars numbering nearly twenty thousand moved up from Afghanistan and threatened the British post of Landi Kotal in the Khyber. They too were driven back into Afghan territory, and the trouble was at an end. The Amir, who had been strangely quiescent, asserted his authority and the irregular warfare waged from Afghan territory ceased.

Policy Justified.

These expeditions have been seized upon by critics to condemn the present policy. They justify it. Thanks to the confidence engendered by ten years of non-aggression, the disturbed area was localised, the Khyber was kept open, the Afridis lent their aid in concluding peace. For these reasons, when the Government of India proposed the occupation of further strategical points in order to control the Zakka Khels, the Secretary of State wisely imposed his embargo. The strength of the position was still further demonstrated when in 1910 the tribesmen suffered heavy losses in consequence of measures to suppress the arms traffic (*q. v.* Gun-running). The frontier is always in a state of suppressed ferment. No one knows what will happen to-morrow. But the tribesmen, feeling confident in the knowledge that no attack on their independence is contemplated and growing richer in consequence of the development of trade and agriculture, are more easily handled. With the removal of the Russian menace, or rather its transference to Persia, the importance of the North-West Frontier has tended to subside. There are still heard mutterings of the necessity for a reversion to the forward policy, and for the occupation of the Independent Territory right up to the Durand line. But they are not regarded seriously. The tribesmen are so saturated with rifles and ammunition, as the result of importations from the Persian Gulf, that the task would be long and costly. When it was achieved the frontier problem would only have shifted. Instead of a frontier against the Independent tribesmen, India would have a frontier against Afghanistan, and the problem would still be present, only in an aggravated form.

The Frontier and the War.

The history of the Frontier during the war is one of sporadic unrest; but that is its normal history. There was however only one expedition, that of 1917 against the most troublesome tribe on the whole Frontier, the Mahsuds whose cup of iniquity was overflowing. These disturbances are fully described in the Indian

Year Book for 1917 (pp. 154, 155, 156). But in May of this year, when the effects of the German and Turkish machinations in Central Asia had had time fully to manifest themselves, the Chief Commissioner of the North-West Frontier Province was able to say that "as regards the Tribes, the Frontier has been quieter since the outbreak of the war than it was for the four years before it, and you have seen yourselves that in spite of the pre-occupations of Government they have not hesitated to go to great expense in men and money to guard the Peshawar border against the depredations of the Mohmands and the Derajat border against the incursions of the Mahsuds." The most active manifestation of discontent came farther west, from a part of the Frontier which is regarded as comparatively immune to disturbance. The Marris, one of the tribes in eastern Baluchistan, on a raiding expedition and temporarily interrupted traffic on the Hurnai railway. A small column went into their country and they were sharply punished, the losses being stated by the tribe to be 300 killed and about 700 wounded out of a total male population of 12,500. The rising had some effect among neighbouring tribes, but the conduct of the leaders and tribesmen of Baluchistan was on the whole admirable.

Frontier Operations in 1919.

In the early stages of the Afghan war of 1919 (*vide infra*) it appeared that the frontier tribes had no desire to take part in the operations and the check given to the advance of the Afghan Army at the outset of the campaign further tended to keep the tribes quiet. The first signs of wavering were discerned on May 11, and a few days later owing to the number of desertions from the Khyber Rifles it became necessary to disband that corps, a step which was bound to have an effect on the Afridis. The danger of an Afridi rising was, however, averted. The danger zone later shifted to South Waziristan where, consequent on the abandonment by our troops of the Upper Tochi posts, the political situation changed in one night from set fair to stormy and the Viceroy on May 27 reported, "we must be ready for a possible rising of Mahsuds and Waziris, reaching possibly to Sheranni, Bhitanni and even Zhob." In a later despatch the Viceroy explained the circumstances in which the evacuation of the Upper Tochi posts was carried out and said:—"Adverse criticism of these withdrawals is easy after the event; but it is an open question whether we should not have found ourselves more seriously embarrassed had these isolated posts been invested by the enemy. The situation facing the officers responsible was critical and fraught with many difficulties; we are confident they took a deliberated review of the position before exercising their judgment as they did." The fears expressed on May 27 were to a great extent realised.

Action of the Tribesmen.

The Mahsuds and North Waziris seized Khajuri and Shinkai, surrounded Jandola, Murtaza, Kirghi Manji and other militia posts, threatened Miranshah, invaded the Bannu districts and burned villages in British territory. The South Waziris, in co-operation with the Bhitannis, hurried the

retirement of the South Waziristan Militia towards Fort Sandeman and poured into the Zhob Valley in pursuit. They succeeded in forcing the evacuation by the Zhob Militia of Mir Ali Khel Fort, with large stores of rifles, ammunition and supplies, induced the Sherannis, and the majority of the tribes in Lower Zhob to revolt and attacked Fort Sandeman. In the engagements with these Waziris on the 30th and 31st of May, five British officers of the Militia were killed and others wounded.

Throughout June and July, all sections of the Mahsuds and Waziris continued actively hostile. Mail tongas were looted, parties repairing telegraph lines were attacked and the posts still held by us were continually being sniped. A Mahsud Jirgah held at Kaniguram on the 9th of July, sent a message to the Afghan General Nadir Khan to the effect that if the Afghans would supply them with guns, rifles and money, they would drive the British across the Indus. Towards the end of July, the Mahsuds and North Waziris assisted Nadir Khan by occupying Boya, a point in the Daur country, eight miles above Miranshah. Meanwhile, the Wana Waziris continued to invade the Upper Zhob and at Kapip on the 15th and 16th July made an attack in force upon the troops escorting convoys to Fort Sandeman. In this engagement the British lost 66 killed (including 8 British officers) and 55 wounded.

August saw even greater activity. Early in the month four lashkars of Mahsuds were out. One of these attacked a picket of the 82nd Punjabis at Saidi, twelve miles from Bannu, killing twenty of them. Others attacked the Jandola convoys, threatened the Tank railway and raided Luni and other villages in the British area. On the 27th of August, the Birni post was entered, two of the garrison being killed and four wounded, but the Mahsuds were repulsed. One of these gangs on the 29th murdered 16 labour corps coolies near Laki Marwat and several smaller raids occurred in the Dera Ismail Khan and Bannu districts.

Punitive Measures Inevitable.

Although peace was signed with the Afghans on the 8th August, the Mahsuds and Waziris continued their raids throughout September, plundering peaceful villages. On the 19th of September, the Tank railway station was attacked and a raid was made on the Zarkani post in which a British officer was killed. On the 23rd Khirghi was attacked and five sepoy were killed. Insecurity of life and property in the Bannu and Dera Ismail Khan districts finally became such as to make the position intolerable and by the beginning of October it was clear that punitive measures could not be avoided. A belief was widespread in Waziristan that the British had made a compact with the Amir to transfer their country after six months to Afghanistan. The measure of success which the tribesmen had secured had tended to embolden them, and after such flagrant offences their continued immunity would have made our position very difficult. In order to win security for our harassed border population and teach the recalcitrant tribes a much needed lesson, it was decided to summon Wazir and Mahsud jirgas and demand reparation and compensation from them for the damage they had done, announcing to them

at the same time our intention of making roads and locating troops in certain parts of their territory. They were informed that if they refused to accept our terms they would, after being given ample time to remove their women and children to places of safety, be subjected to an intensive bombardment from the air. If the tribes still proved recalcitrant, punitive measures with troops would be undertaken but it was hoped that the effect of the aerial campaign would be such as to render more serious measures unnecessary.

The operations were under the command of Major-General S. H. Climo who had under him six Indian infantry brigades with the necessary complements of other arms. The operations began early in November and by the middle of the month the Tochi Waziris had accepted the terms offered to them, which were to the effect that there was no intention of handing their country over to the Amir; the British Government would make roads, station troops and build posts wherever it might be desirable in the Tochi Agency, and the Waziris would not interfere with that work; the Tochi Waziris were to hand back all rifles and other military equipment taken since 1st May 1919, and not to interfere with the movement of troops and convoys within the Agency; a fine was exacted and the tribal allowances were to be suspended. Similar terms were offered to, but refused by, the Mahsuds whose towns and villages together with those of the recalcitrant Waziris, were accordingly bombed and some of the Tochi posts were re-occupied. The bombing had the effect of quickly bringing in the Kazha section of the Madda Khel Waziris, who had held out previously, but the Wana Waziris and the Mahsuds continued to show opposition. At the same time there was a considerable amount of raiding by trans-border gangs, who in many cases were known to have been reinforced by deserters from the militia. Of these raids the most serious took place on the night of November 26, when the Indian cavalry lines at Kohat were raided, a sentry was killed, and a number of rifles and a box of ammunition were stolen from the magazine which was broken open. About the same date the Khyber caravan was attacked near Landi Kotal, and a few days later a train, carrying an escort of 24 rifles and two Lewis guns, was attacked by nomad Waziris near Thal when 36 were killed and 50 wounded on the train. While raids of this description were going on the Mahsuds, who showed signs of being well led and extremely mobile, attacked small parties of the Derajat column whenever an opportunity offered. On December 11 and 12 they were engaged north-west of Jandola and suffered heavily. It was in that neighbourhood that the Mahsuds, about 2,000 strong, were attacked when holding the Sarkai ridge on December 18, and the following days. This attack culminated on the 21st when our casualties were British officers killed 2: wounded 8. Indian officers, killed one: wounded, 6. Indian other ranks, killed 28: wounded 208: missing 27. The Mahsuds suffered heavily in this engagement, which witnessed the hardest fighting ever known on the frontier, and a few days later it was announced that they had accepted our terms. Some sections of them, however, with the Wana Waziris still remained recalcitrant.

AFGHANISTAN.

The relations of Afghanistan with the Indian Empire were dominated by one main consideration—the relation of Afghanistan to a Russian invasion of India. All other considerations were of secondary importance. For nearly three-quarters of a century the attitude of Great Britain toward successive Amirs has been dictated by this one factor. It was in order to prevent Afghanistan from coming under the influence of Russia that the first Afghan War of 1838 was fought—the most melancholy episode in Indian frontier history. It was because a Russian envoy was received at Kabul whilst the British representative was turned back at Ali Masjid that the Afghan War of 1878 was waged. Since then the whole end of British policy toward Afghanistan has been to build up a strong independent State, friendly to Britain, which would act as a buffer against Russia, and so to order our frontier policy that we should be in a position to move large forces up, if necessary, to support the Afghans in resisting aggression.

Gates to India.

A knowledge of the trans-frontier geography of India brought home to her administrators the conviction that there were only two main gates to India—through Afghanistan, the historic route to India, along which successive invasions have poured, and by way of Seistan. It has been the purpose of British policy to close them, and of Russia to endeavour to keep them at any rate half open. To this end having pushed her trans-Persian railway to Samarkand Russia thrust a military line from Merv to the Kushkinsky Post, where railway material is collected for its immediate prolongation to Herat. Later, she connected the trans-Siberian railway with the trans-Caucasian system, by the Orenburg-Tashkent line, thus bringing Central Asia into direct touch with her European magazines. Nor has Great Britain been idle. A great military station has been created at Quetta. This is connected with the Indian railway system by lines of railway which climb to the Quetta Plateau by the Bolan Pass and through the Chapper Rift, lines which rank amongst the most picturesque and daring in the world. From Quetta the line has been carried by the Khojak tunnel through the Khwaja Amran Range, until it leads out to the Afghan Border at New Chaman, where it opens on the route to Kandahar. The material is stocked at New Chaman which would enable the line to be carried to Kandahar in sixty days. In view of the same menace the whole of Baluchistan has been brought under British control. Quetta is now one of the great strategical positions of the world, and nothing has been left undone which modern military science can achieve to add to its natural strength. In the opinion of many military authorities it firmly closes the western gate to India, either by way of Kandahar, or the direct route through Seistan.

Relations with India.

Between the advanced posts on either side stands the Kingdom of Afghanistan. The end of British policy has been to make it strong and friendly. In the first particular it has largely succeeded. When the late Abdurrahman was invited to ascend the throne, as the only means of escape from the tangle of 1879, none realised his great qualities. Previously the Amir of Afghanistan had been the chief of a confederacy of clans. Abdurrahman made himself master in his own kingdom. By means into which it is not well closely to enter, he beat down opposition until none dared lift a hand against him. Aided by a British subsidy of twelve lakhs of rupees a year, increased to eighteen by the Durand Agreement of 1893, and subsequently to over 20 lakhs, he established a strong standing army and set up arsenals under foreign supervision to furnish it with arms and ammunition. Step by step his position was regularised. The Anglo-Russian Boundary Commission,—which nearly precipitated war over the Penjdeh episode in 1885,—determined the northern boundaries. The Pamirs Agreement delimited the borders amid those snowy heights. The Durand Agreement settled the border on the British side, except for a small section to the west of the Khyber which remained a fruitful source of trouble between Afghanistan and ourselves until 1919, when the Afghan claims and action upon the undemarcated section led to war. That section was finally surveyed and the frontier determined shortly after the conclusion of peace with Afghanistan. Finally the McMahon award closed the old feud with Persia over the distribution of the waters of the Helmand in Seistan. It was estimated by competent authorities that about the time of Abdurrahman's death Afghanistan was in a position to place in the field, in the event of war, one hundred thousand well-armed regular and irregular troops, together with two hundred thousand tribal levies and to leave fifty thousand regulars and irregulars and a hundred thousand levies to maintain order in Kabul and the provinces. But if Afghanistan were made strong, it was not made friendly. Abdurrahman Khan distrusted British policy up to the day of his death. All that can be said is that he distrusted it less than he distrusted Russia, and if the occasion had arisen for him to make a choice, he would have opposed a Russian ad-

Further east the Indian railway system has been carried to Jamrud, at the entrance to the Khyber Pass. A first class military road,

vance with all the force at his disposal. He closed his country absolutely against all foreigners, except those who were necessary for the supervision of his arsenals and factories. He refused to accept a British Resident, on the ground that he could not protect him, and British affairs have been entrusted to an Indian agent, who is in a most equivocal position. At the same time he repeatedly pressed for the right to pass by the Government of India and to establish his own representative at the Court of St. James.

The Amir Habibulla.

It used to be one of the commonplaces of Indian discussion that the system which Abdurrahman Khan had set up would perish with him, because none other was capable of maintaining it. Abdurrahman Khan died in 1901. His favourite son, Habibulla, who had been gradually initiated into the administration, peacefully succeeded him, and peacefully retained his seat on the throne until he was murdered in 1919. He concluded in 1905 the Dane Treaty, by which he accepted the same obligations on the same terms as his father. He visited India in 1907, and apparently both enjoyed and profited by his experiences.

Immediately on the outbreak of the war His Majesty the Amir declared his strict neutrality, and that pledge he straitly observed. To those unacquainted with the difficulties of this Ruler some things occurred which it was not easy to understand. A German and Austrian mission was admitted to Kabul; several Turkish emissaries were entertained; and more than one representative of the revolutionary movement in India was permitted to roam the country. But the Amir had to reckon with the fanatical and ignorant forces in his own country. With the most sincere desire loyally to act up to his pledge of neutrality, he could not entirely ignore the forces in Afghanistan which, ignorant of the strength of the British Empire, were willing to lend a ready ear to the preachings of a jihad, or holy war of Islam. By degrees the Amir took matters into his own hand; the anti-British emissaries were gradually expelled. And when in 1918 Germany, with the Turks as her Islamic tools, prepared to stir up trouble in Afghanistan, with a view to diverting the energies of the British Government to the North-West frontier, the Amir took vigorous steps to maintain his authority and declared that no foreign troops, no matter what their nationality or religion, should be allowed to traverse Afghan territory.

THE AFGHAN WAR, 1919.

The whole situation in Afghanistan was changed by the murder (20 February 1919) of the Amir Habibulla Khan, at Laghman near Jellalabad. His brother, Nasrulla Khan, immediately assumed control of affairs and was proclaimed Amir at Jellalabad with the concurrence of the late Amir's eldest son, Inyatulla Khan, and some of the officers of the State. Meanwhile, **Amanulla Khan**, the third son of the late Amir, was proclaimed Amir at Kabul and Nasrulla Khan, having abdicated, swore allegiance to him. At a durbar in Kabul, Col. Shah Ali Raza was condemned to death as the actual murderer of the Amir and Nasrulla Khan was sentenced to imprisonment for life as an accomplice. The two eldest sons of the late Amir were also placed in close confinement.

The new Amir, confronted by faction troubles and by disaffection in the Army, and being accused by some of his subjects of having been a party to the murder, at once found himself in a position of great difficulty. At the durbar already mentioned he had sought to gain popularity by declaring Afghanistan independent internally and externally, and he sought further to establish his position by lavish offers of increased pay to his troops and by adopting from the first an attitude of open hostility towards the British Government which was calculated to appeal to those fanatical sections of the populace whom the Amir Habibulla had with difficulty restrained during the progress of the European War. Disaffection, however, threatened to grow into rebellion and by the end of April he had determined to distract the attention of his subjects from internal troubles by embarking on war. He sought to

win over the soldiers and the peasantry by spreading absurdly exaggerated accounts of the disturbances in the Punjab, the rich bazars and fair fields of which he described as lying defenceless at the mercy of the Afghan invaders. In a firman which he issued early in May, he said: "I am prevented by international law from interfering with the internal policy of the British Government, and I have nothing to do with it; but from the point of view of Islam and mankind, I dislike unfair laws and, in my view, Indians, in rising and creating disturbances, are right. But these risings and disturbances are not confined to India: in Afghanistan also their bad effects are seen." It was discovered later how grossly the Amir had been misled by informants in India, the sort of information on which he launched his rash campaign being shown by the following letter to him from the notorious Afghan Postmaster at Peshawar:—"Government has not sufficient troops in India and often moves about one regiment consisting of two or three companies to make a display. In spite of many telegrams sent by Chief Commissioner no regiments have arrived by train. British subjects will not supply recruits. There are disturbances throughout India and troops if sent for from England will not arrive in time. It has been given out in public meeting that Amir and Ghazis are ready to help Indians, and if war is delayed people will be displeased with Amir. They cried with one voice they could not forget oppressions and tyranny of British Government. If after sealed leaflets have been circulated Sipah Salar especially refrains from invading India, Hindus and Moslems will be much displeased. It is not

expedient to delay and give time to the English to collect troops." It was also found that the Amir hoped to obtain support from the Bolsheviks. Among letters from him which were intercepted was one addressed to a Peshawar agitator who had been a member of the Bolshevik committee there. Abdur Rahman, the new Afghan envoy, had also had dealings with the same committee, and his post-bag, which was intercepted, contained a number of copies for distribution of inflammatory leaflets, and also a letter from Tchitcherin, the Commissary for Foreign Affairs, instructing the envoy to obtain from Hindus and Mahomedans deeds of allegiance to the Amir. At Thal a manifesto was found couched in violent language, and issued by the Provisional Government of India." The follow-

ing extract is typical:—"A compact has been entered into with the forces of invasion by the Provisional Government. Your real interests would be destroyed by fighting against invaders; you should, therefore, not do this, but rather use every possible means to kill British, continue to tear up railways and cut down the telegraphs and refuse to help the British with men and money. Supply the armies of the invaders with provisions; thus shall you earn peace at their hands and obtain *sanads* of honour."

These facts have been cited to show how the Amir, in determining upon war, was supported by a wholly false idea of the reception his troops were likely to receive in India and possibly by an equally mistaken idea of the assistance he might obtain from the Bolsheviks in Central Asia.

TIBET.

Recent British policy in Tibet is really another phase in the long-drawn-out duel between Great Britain and Russia in Central Asia. The earliest efforts to establish communication with that country were not, of course, inspired by this apprehension. When in 1774 Warren Hastings despatched Bogle on a mission to the Tashi-Lama of Shigatse,—the spiritual equal, if not superior, of the Dalai Lama of Lhasa—his desire was to establish facilities for trade, to open up friendly relations with a Power which was giving us trouble on the frontier, and gradually to pave the way to a good understanding between the two countries. After Warren Hastings' departure from India the subject slept, and the last Englishman to visit Lhasa, until the Younghusband Expedition of 1904, was the unofficial Manning. In 1885, under the inspiration of Colman Macaulay, of the Bengal Civil Service, a further attempt was made to get into touch with the Tibetans, but it was abandoned in deference to the opposition of the Chinese, whose suzerainty over Tibet was recognised, and to whose views until the war with Japan, British statesmen were inclined to pay excessive deference. But the position on the Tibetan frontier continued to be most unsatisfactory. The Tibetans were aggressive and obstructive, and with a view to putting an end to an intolerable situation, a Convention was negotiated between Great Britain and China in 1890. This laid down the boundary between Sikkim and Tibet, it admitted a British protectorate over Sikkim, and paved the way for arrangements for the conduct of trade across the Sikkim-Tibet frontier. These supplementary arrangements provided for the opening of a trade mart at Yatung, on the Tibetan side of the frontier, to which British subjects should have the right of free access, and where there should be no restrictions on trade. The agreement proved useless in practice, because the Tibetans refused to recognise it, and despite their established suzerainty, the Chinese Government were unable to secure respect for it.

Russian Intervention.

This was the position when in 1899 Lord Curzon, Viceroy of India, endeavoured to get into direct touch with the Tibetan authorities.

Three letters which he addressed to the Dalai Lama were returned unopened, at a time when the Dalai Lama was in direct intercourse with the Tsar of Russia. His emissary was a Siberian Dorjief, who had established a remarkable ascendancy in the counsels of the Dalai Lama. After a few years' residence at Lhasa Dorjief went to Russia on a confidential mission in 1899. At the end of 1900 he returned to Russia at the head of a Tibetan mission, of which the head was officially described in Russia as "the senior Tsanite Khomba attached to the Dalai Lama of Tibet." This mission arrived at Odessa in October 1900, and was received in audience by the Tsar at Livadia. Dorjief returned to Lhasa to report progress, and in 1901 was at St. Petersburg with a Tibetan mission, where as bearers of an autograph letter from the Dalai Lama they were received by the Tsar at Peterhoff. They were escorted home through Central Asia by a Russian force to which several Intelligence Officers were attached. At the time it was rumoured that Dorjief had, on behalf of the Dalai Lama, concluded a treaty with Russia, which virtually placed Tibet under the protectorate of Russia. This rumour was afterwards officially contradicted by the Russian Government.

The Expedition of 1904.

In view of these conditions the Government of India, treating the idea of Chinese suzerainty over Tibet as a constitutional fiction, proposed in 1903 to despatch a mission, with an armed escort, to Lhasa to discuss the outstanding questions with the Tibetan authorities on the spot. To this the Home Government could not assent, but agreed, in conjunction with the Chinese Government, to a joint meeting at Khamba Jong, on the Tibetan side of the frontier. Sir Francis Younghusband was the British representative, but after months of delay it was ascertained that the Tibetans had no intention of committing themselves. It was therefore agreed that the mission, with a strong escort, should move to Gyantse. On the way the Tibetans developed marked hostility, and there was fighting at Tuna, and several sharp encounters in and around Gyantse. It was therefore decided that the mission should

advance to Lhasa, and on August 3rd, 1904, Lhasa was reached. There Sir Francis Younghusband negotiated a convention by which the Tibetans agreed to respect the Chinese Convention of 1890; to open trade marts at Gyantse, Gartok and Yatung; to pay an indemnity of £500,000 (seventy-five lakhs of rupees); the British to remain in occupation of the Chumbi Valley until this indemnity was paid off at the rate of a lakh of rupees a year. In a separate instrument the Tibetans agreed that the British Trade Agent at Gyantse should have the right to proceed to Lhasa to discuss commercial questions, if necessary.

Home Government intervenes.

For reasons which were not apparent at the time, but which have since been made clearer, the Home Government were unable to accept the full terms of this agreement. The indemnity was reduced from seventy-five lakhs of rupees to twenty-five lakhs, to be paid off in three years, and the occupation of the Chumbi Valley was reduced to that period. The right to despatch the British Trade Agent to Lhasa was withdrawn. Two years later (June 1906) a Convention was concluded between Great Britain and China regulating the position in Tibet. Under this Convention Great Britain agreed neither to annex Tibetan territory, nor to interfere in the internal administration of Tibet. China undertook not to permit any other foreign State to interfere with the territory or internal administration of Tibet. Great Britain was empowered to lay down telegraph lines to connect the trade stations with India, and it was provided that the provisions of the Convention of 1890, and the Trade Regulations of 1893, remained in force. The Chinese Government paid the indemnity in three years and the Chumbi Valley was evacuated. The only direct result of the Mission was the opening of the three trade marts and the establishment of a British Trade Agent at Gyantse.

The Anglo-Russian Agreement.

The reason underlying the action of the British Government in modifying, in such material particulars, the Convention of Lhasa was apparent later. The Anglo-Russian Agreement was in process of negotiation, and under that Agreement Great Britain was pledging herself not to annex any portion of Tibetan territory, nor to send a representative to Lhasa. A seventy-five year occupation of the Chumbi Valley would have been indistinguishable from annexation. The portions of the Anglo-Russian Agreement which relate to Tibet are as follows:—

Article I.—The two High Contracting Parties engage to respect the territorial integrity of Tibet and to abstain from all interference in its internal administration.

Article II.—In accordance with the admitted principle of the suzerainty of China over Tibet, Great Britain and Russia engage not to enter into negotiations with Tibet, except through the intermediary of the Chinese Government. This engagement does not exclude the direct relations between the British Commercial Agents and the Tibetan authorities, provided

for in Article V of the Convention between Great Britain and Tibet of the 7th September, 1904, and confirmed by the Convention between Great Britain and China of the 27th April 1906; nor does it modify the engagements entered into by Great Britain and China in Article I of the said Convention of 1906.

It is clearly understood that Buddhists; subjects of Great Britain or of Russia, may enter into direct relations on strictly religious matters with the Dalai Lama, and the other representatives of Buddhism in Tibet; the Governments of Great Britain and Russia engage, as far as they are concerned, not to allow those relations to infringe the stipulations of the present arrangement.

Article III.—The British and Russian Governments, respectively, engage not to send Representatives to Lhasa.

Article IV.—The two High Contracting Parties engage neither to seek nor to obtain, whether for themselves or for their subjects, any concessions for railways, roads, telegraphs and mines, or other rights in Tibet.

Article V.—The two Governments agree that no part of the revenues of Tibet, whether in kind or in cash, shall be pledged or assigned to Great Britain or Russia or to any of their subjects.

Annexed to the Agreement was a re-affirmation of the declaration for the evacuation of the Chumbi Valley after the payment of three annual instalments of the indemnity, provided that the trade marts had been effectively opened for three years and that the Tibetans had complied in all respects with the terms of the Treaty.

Chinese Action.

The sequel to the Anglo-Russian Agreement was dramatic, although it ought not to have been unexpected. On the approach of the Younghusband Mission the Dalai Lama fled to Urga, the sacred city of the Buddhists in Mongolia. He left the internal government of Tibet in confusion, and one of Sir Francis Younghusband's great difficulties was to find Tibetan officials who would underfake the responsibility of signing the Treaty. Now the suzerainty of China over Tibet had been explicitly reaffirmed. It was asserted that she would be held responsible for the foreign relations of Tibet. In the past this suzerainty, having been a "constitutional fiction," it was inevitable that China should take steps to see that she had the power to make her will respected at Lhasa. To this end she proceeded to convert Tibet from a vassal state into a province of China. In 1908 Chao Erh-feng, acting Viceroy in the neighbouring province of Szechuen, was appointed Resident in Tibet. He proceeded gradually to establish his authority, marching through eastern Tibet and treating the people with great severity. Meantime the Dalai Lama, finding his presence at Urga, the seat of another Buddhist Pontiff, irksome, had taken refuge in Si-ning. Thence he proceeded to Peking, where he arrived in 1908, was received by the Court, and despatched

to resume his duties at Lhasa. Moving by leisured stages, he arrived there at Christmas 1909. But it was soon apparent that the ideas of the Dalai Lama and of the Chinese Government had little in common. The Dalai Lama expected to resume the temporal and spiritual despotism which he had exercised prior to 1904. The Chinese intended to deprive him of all temporal power and preserve him as a spiritual pope. The Tibetans had already been exasperated by the pressure of the Chinese soldiery. The report that a strong Chinese force was moving on Lhasa so alarmed the Dalai Lama that he fled from Lhasa, and by the irony of fate sought a refuge in India. He was chased to the frontier by Chinese troops, and took up his abode in Darjeeling, whilst Chinese troops overran Tibet.

Later Stages.

The British Government, acting on the representations of the Government of India, made strong protests to China against this action. They pointed out that Great Britain, while disclaiming any desire to interfere with the internal administration of Tibet, could not be indifferent to disturbances in the peace of a country which was a neighbour, on intimate terms with other neighbouring States on our frontier, especially with Nepal, and pressed that an effective Tibetan Government be maintained. The attitude of the Chinese Government was that no more troops had been sent to Tibet than were necessary for the preservation of order, that China had no intention of converting Tibet into a province, but that being responsible for the good conduct of Tibet, she must be in a position to see that her wishes were respected by the Tibetans. Finally, the Chinese remarked that the Dalai Lama was such an impossible person that they had been compelled again to depose him. Here the matter might have rested, but for the revolution in China. That revolution broke out in Szechuen, and one of the first victims was Chao Erh-feng. Cut off from all support from China, surrounded by a hostile and infuriated populace, the Chinese troops in Tibet were in a hopeless case; they surrendered, and sought escape not through China, but through India, by way of Darjeeling and Calcutta. The Dalai Lama returned to Lhasa, and in 1913, in the House of Lords on July 28, Lord Morley stated the policy of the British Government in relation to these changes. He said the declaration of the President of the Chinese Republic saying that Tibet came within the sphere of Chinese internal administration; and that Tibet was to be regarded as on an equal footing with other provinces of China, was met by a very vigorous protest from the British Government. The Chinese Government subsequently accepted the principle that China is to have no right of active intervention in the internal administration of Tibet, and agreed to the constitution of a conference to discuss the relation of the three countries. This Convention met at Simla when Sir Henry McMahon, Foreign Secretary to the Government of India; Mr. Ivan Chen, representing China; and Mr. Long Chen Shatra, Prime Minister to the Dalai Lama, threshed out these issues. Whilst no official pronouncement has been made on the subject, it is understood that

a Convention was initiated in June which recognised the complete autonomy of Tibet proper, with the right of China to maintain a Resident at Lhasa with a suitable guard. A semi-autonomous zone was to be constituted in Eastern Tibet, in which the Chinese position was to be relatively much stronger. But this Convention, it is understood, has not been ratified by the Chinese Government, owing to the difficulty of defining Outer and Inner Tibet, and in 1918 Tibet took the offensive and threw off the last vestiges of Chinese suzerainty. When the Chinese province of Szechuan went over to the South, the Central Government at Peking was unable to finance the frontier forces or to withstand the Tibetan advance, which was directed from Lhasa and appeared to be ably managed. After the Tibetan army had occupied some towns on the confines of the Szechuan marches, hostilities were suspended and an armistice was concluded. In the latter part of 1919, reports were circulated in China and Calcutta to the effect that this state of affairs had been interrupted by a Chinese invasion of Tibet; but the reports were contradicted by the Government of India.

Political Importance of Tibet.

The political importance of Tibet in relation to India has of necessity been changed by the Anglo-Russian Agreement. So long as that instrument is in force, it tends to decline. But no treaties are everlasting. The question has been admirably summed up by Sir Valentine Chirol ("The Middle Eastern Question"), written before the Agreement was reached. "What it would be impossible to view without some concern," he wrote, "would be the ascendancy of a foreign and possibly hostile power at Lhasa, controlling the policy of a great politico-religious organisation whose influence can and does make itself appreciably felt all along the north-eastern borderland of India. Lhasa is the stronghold of Lamaistic Buddhism, a debased form of Buddhism largely overgrown with tantic philosophy—Lhasa is in fact the Rome of Central Asian Buddhism, and the many-storied Po-ta-la on the hill to the west of the city is its Vatican, whence its influence radiates throughout innumerable lamaseries or Buddhist monasteries, not only into Turkestan and Mongolia and Western China, but across the Himalayas into the frontier States of our Indian Empire. Corrupt and degraded as it is, it is still unquestionably a power, and just because it is corrupt and degraded it might lend itself more readily to become for a consideration the tool of Russian ambitions.....Tibet as a Russian dependency would, at any rate, no longer be a *quantité négligeable*, and our north-eastern frontier, naturally formidable as it is, would require to be watched, just as every civilised country has to watch its frontiers, whatever they may be, where they march with a powerful neighbour, and most of all in India, where our frontier is fringed with semi-independent Native States, over which our authority is conditioned mainly on the hitherto unrivalled prestige of our Imperial power in Asia."

British Trade Agent, Yatung.—D. Macdonald.

British Trade Agent, Gyantse.—Major W. L. Campbell.

THE NORTH-EASTERN FRONTIER.

The position on the northern frontier has been considered as if the British line were contiguous with that of Tibet. This is not so. The real frontier States are Kashmir, Nepal, Sikkim and Bhutan. From Chitral to Gilgit, now the northernmost posts of the Indian Government, to Assam, with the exception of the small wedge between Kashmir and Nepal, where the British district of Kumaon is thrust right up to the confines of Tibet, for a distance of nearly fifteen hundred miles there is a narrow strip of native territory between British India and the true frontier. The first of these frontier States is **Kashmir**. The characteristics of this State are considered under Native States (*q.v.*); it is almost the only important Native State in India with frontier responsibilities, and it worthily discharges them through the agency of its efficient Imperial Service troops—four regiments of infantry and two Mountain Batteries, composed mainly of the Rajput Dogras, who make excellent fighting material. One of the most important trade routes with Tibet passes through Kashmir—that through Ladak. Then we come to the long narrow strip of **Nepal** This Gurkha State stands in special relations with the British Government. It is for all practical purposes independent, and the British resident at Khatmandu exercises no influence on the internal administration. The governing machine in Nepal is also peculiar. The Maharaj Dhiraj, who comes from the Sesodia Rajput clan, the bluest blood in India, takes no part in the administration. All power vests in the Prime Minister, who occupies a place equivalent to that of the Mayors of the Palace, or the Shoguns of Japan. The present Prime Minister, Sir Chandra Shamsher, has visited England, and has given conspicuous evidence of his attachment to the British Government. Nepal is the main Indian outpost against Tibet, or against Chinese aggression through Tibet. The friction between the Chinese and the Nepalese used to be frequent, and in the eighteenth century the Chinese marched an army to the confines of Khatmandu—one of the most remarkable military achievements in the history of Asia. Under the firm rule of the present Prime Minister Nepal has been largely free from internal disturbance, and has been raised to a strong bulwark of India. Nepal is the recruiting ground for the Gurkha Infantry, who form such a splendid part of the fighting arm of the Indian Empire. Beyond Nepal are the smaller States of **Bhutan** and **Sikkim**, whose rulers are Mongolian by extraction and Buddhists by religion. In view of Chinese aggressions in Tibet, the Government of India in 1910 strengthened their relations with Bhutan by increasing their subsidy from fifty thousand to a lakh of rupees a year, and taking a guarantee that Bhutan would be guided by them in its foreign relations. Afterwards China had officially notified that Great Britain would protect the rights and interests of these States.

Assam and Burma.

We then come to the Assam border tribes—the Daffas, the Miris, the Abors and the Mishmis.

Excepting the Abors none of these tribes have recently given trouble. The murder of Mr. Williamson and Dr. Gregorson by the Minyong Abors in 1911 made necessary an expedition to the Dihang valley of the Abor country on the N. E. frontier. A force of 2,500 and about 400 military police was employed from October 1911 to April 1912 in subduing the tribe. After two or three small actions the murderers were delivered up. The cost of the expedition was Rs. 21,60,000. At the same time friendly missions were sent to the Mishmi and Miri countries. Close contact with these forest-clad and leech-infested hills has not encouraged any desire to establish more intimate relations with them. The area occupied by the Nagasares runs northwards from Manipur. The Nagasares, a Tibeto-Burman people, devoted to the practice of head hunting, which is still vigorously prosecuted by the independent tribes. The Chin Hills is a tract of mountainous country to the south of Manipur. The corner of India from the Assam boundary to the northern boundary of the Shan States is for the most part included in the Myitkyina and Bhamo districts of Burma. Over the greater part of this area, a labyrinth of hills in the north, no direct administrative control is at present exercised. It is peopled by the Shans and the Kachins. Civilisation is said to be progressing and steps have been taken to prevent encroachments from the Chinese side. There is a considerable trade with China through Bhamo. On the Eastern frontier of Burma are the Shan States, with an area of fifty thousand square miles and a population of 1,300,000. These States are still administered by the Sawbwas or hereditary chiefs, subject to the guidance of Superintendents and Assistant Superintendents. The Northern Shan Railway to Lashio, opened in 1903, was meant to be a stage in the construction of a direct railway link with China, but this idea has been put aside, for it is seen that there can never be a trade which would justify the heavy expenditure. The Southern Shan States are being developed by railway connection. The five Karenni States lie on the frontier south of the Shan States. South of Karenni the frontier runs between Siam and the Tenasserim Division of Burma. The relations between the Indian Government and the progressive kingdom of Siam are excellent.

The Frontier during the war.

Unrest, which had been brewing for some time among the Kachins, came to a head in December 1914 and January 1915, when punitive operations were undertaken. The columns originally consisted of Burma Military Police, but as the disturbance appeared more general and likely to spread, regular troops were ordered up to Myitkyina. In the Kamaing and Mogaung Jurisdictions, and the adjoining unadministered territory, six columns operated during January and February. The slight opposition encountered was in all cases successfully overcome, the rebel stockades captured, and the implicated villages destroyed.

Manipur maintained a double company for service with the Army during the war and raised a labour corps for service in France. Unfortunately some of the Kuki tribes subjects of the Manipur State, alarmed at the prospect of being sent to the scene of war and being ill-advised and misinformed as to the strength of the British forces, opposed all attempts to recruit for the labour corps and eventually broke into open rebellion. The columns of

the Assam Rifles sent against them met with serious opposition, and had a considerable number of casualties, before the campaign of pacification was successful. On the North-East Frontier the restriction on trans-frontier tours during the war prevented progress in the cultivation of friendly relations with the hill tribes. This is an unsatisfactory state of affairs and is calculated to lead to trouble in the future.

COPYRIGHT.

There is no provision of law in British India for the registration of Copyright. Protection for Copyright accrues under the Indian Copyright Act under which there is now no registration of rights but the printer has to supply copies of these work as stated in that Act and in the Printing Presses and Books, Act XXV of 1867. The Indian Copyright Act made such modifications in the Imperial Copyright Act of 1911 as appeared to be desirable for adapting its provisions to the circumstances of India. The Imperial Act of 1911 was brought into force in India by proclamation in the *Gazette of India* on October 30, 1912. Under s. 27 of that Act there is limited power for the legislature of British possessions to modify or add to the provisions of the Act in its application to the possession, and it is under this power that the Indian Act of 1914 was passed. The portions of the Imperial Act applicable to British are scheduled to the Indian Act. The Act to which these provisions are scheduled makes some formal adaptations of them to Indian law and procedure, and some material

modifications of them in their application to translations and musical compositions. In the case of works first published in British India the sole right to produce, reproduce, perform or publish a translation is, subject to an important proviso, to subsist only for ten years from the first publication of the work. The provisions of the Act as to mechanical instruments for producing musical sounds were found unsuitable to Indian conditions. "The majority of Indian melodies" it was explained in Council, "have not been published, i.e., written in staff notation, except through the medium of the phonograph. It is possible in many cases to identify the original composer or author, and the melodies are subject to great variety of notation and tune. To meet these conditions s. 5 of the Indian Act follows the English Musical Copyright Act of 1902 by defining **musical work** as meaning any combination of melody and harmony, or either of them, printed, reduced to writing, or otherwise graphically produced or reproduced."

The prospect of linking Europe and Asia by a railway running eastwards through Asia Minor has fascinated men's minds for generations. The plans suggested have, owing to the British connection with India, always lain in the direction of lines approaching India. More than 40 years ago a Select Committee of the House of Commons sat for two years to consider the question of a Euphrates Valley railway. The Shah of Persia applied to the British Foreign Office for the investment of British capital in Persian railway construction many years before the end of the nineteenth century. A proposal was put forward in 1895 for a line of 1,000 miles from Cairo and Port Said to Koweit, at the head of the Persian Gulf. While these projects were in the air, German enterprise stepped in and made a small beginning by constructing the Anatolian railway system. Its lines start from Scutari, on the southern shore of the Bosphorus, opposite Constantinople, and serve the extreme western end of Asia Minor. And upon this foundation was based the Turkish concession to Germans to build the Baghdad Railway.

Meanwhile, Russia was pushing her railways from various directions into the Central Asian territory running along the northern frontiers of Persia and Afghanistan to the borders of Chinese Turkestan. The construction of a Trans-Persian railway, connecting India, across Persia, with the Russian lines between the Black Sea and the Caspian Sea came to the forefront after the conclusion of the historic Anglo-Russian agreement regarding Persia.

The Germans pushed forward their Baghdad railway project with a calculating shrewdness arising from their estimate of the value it would possess in their grand aim to overthrow the British Empire. The outbreak of the great war and the success of the Germans in invading Turkey into it saw the final stages of the construction of the railway pressed forward with passionate energy. Thus, before the overthrow of the Turks and Germans in Asia Minor and of the Germans in France the railway was completed and in use from Scutari across Anatolia, over the Taurus Mountains to Aleppo and thence eastward across the Euphrates to a point between Nisibin and Mosul. The Germans had also by that time constructed a line to Baghdad at the eastern end of the route, northwards from Baghdad to a point a considerable distance beyond Samara.

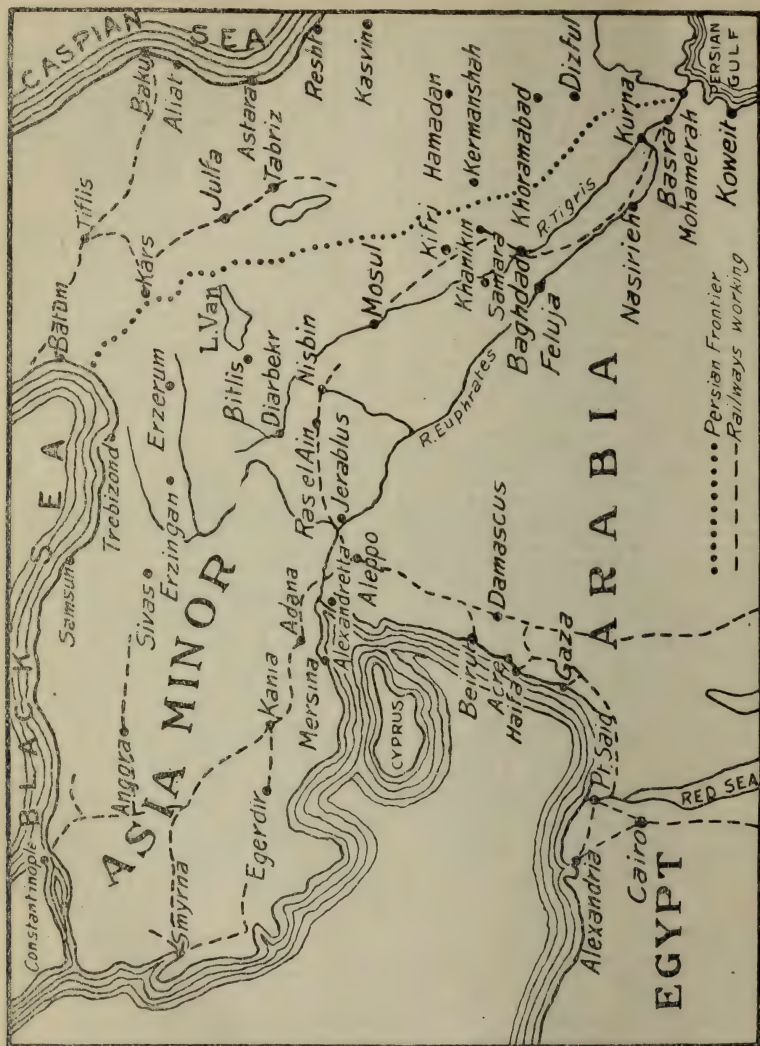
The war compelled the British to undertake considerable railway development northward from Basra, the port at the mouth of the Shat-et-Arab, the broad stream in which the Tigris and Euphrates, after their junction, flow into the head of the Persian Gulf. The British have since the conclusion of peace not yet undertaken the completion of the final stages of the line eastward from Nisibin. Their various lines in Lower Mesopotamia were designed to meet the special requirements of various stages of the war, and since the conclusion of peace some of them have been abolished and others perfected or newly laid. By the time this article appears in print the Mesopotamian system may roughly be de-

scribed as a metre-gauge line from Basra *via* Nasarieh, on the Euphrates, thence northwards to Baghdad, the line passing a considerable distance westward to Kut-I-Amara, of historic fame. From Baghdad the line runs eastward approximately to the foot of the pass through which the Persian road crosses the frontier of that country. A line branches off in the neighbourhood of Kifri in the direction of Mosul. A line also runs westward from Baghdad to Feluja, on the Euphrates.

The Trans-Persian line to join the Russian Caucasian system and the Indian railways first assumed proportions of practical importance in the winter of 1911. Both the Russian and the Indian railway systems were by then well developed up to the point likely to be the termini of a Trans-Persian line. The Russian system reached Julfa, on the Russo-Persian frontier in the Caucasus. During the war this line has been carried thence southward into the region east and south-east of Lake Urumia. The Indian railway system, on the borderland of India and Persia, was similarly much extended and improved during the war. No details have been published of proposals for the continuation of the Russo-Indian ink under the restored conditions of peace, but the new agreement negotiated last summer between England and Persia specially provides for British assistance in the development of Persian natural resources and particularly for the extension and improvement of Persian roads suitable for motor traffic.

There remains the possibility of linking the Russian and Indian railway system by way of Afghanistan. The suggestion has often been made in recent years that the Russian line from Merv to Herat, on the northern frontier of Afghanistan, should be linked to the Indian line which proceeds from Quetta to the Afghan border on Chaman. The distance between the railway heads is about 250 miles. But there have always for strategic reasons been strong military objections to the railway across Afghanistan and after the death of the late Amir Habibullah the Afghan Government flatly opposed any suggestion for carrying the Indian or Russian railway system within their borders. What the new Afghan Government will think about the matter was not shown up to the time this article was written, but the strange situation in Central Asia and beyond the Indian North-West Frontier does not suggest the early removal of the strategic difficulties.

Britain's special interests in regard to Persian communications have hitherto primarily been associated with lines running inland from the Persian Gulf, to supersede the old mule routes. Special importance has for many years been attached to schemes for a railway from Mohammerah (at the opening of the Karun Valley, where the Karun River runs into the Shat-el-Arab, just below Basra, northwards into the rich highland country of Western Persia where the valuable West Persian oil wells also lie. Britain has long established special relations with the Karun Valley and has a large trade there.



Foreign Consular Officers in India.

Name.	Appointment.	Port.
Argentine Republic.		
Mr. C. W. Rhodes	Vice-Consul	Calcutta.
Austria-Hungary.		
The Consul-General for Netherlands, Simla, is in charge of Austro-Hungarian interests during the War.		
Belgium.		
Mr. J. Rabins (in Charge)	Consul	Bombay.
Mr. J. Lince (in Charge)	Do.	Calcutta.
Mr. James Rorie Baxter (Ag.)	Do.	Karachi.
Mr. E. S. Murray	Do.	Aden.
Mr. G. K. Walker	Do.	Madras.
Mr. W. Macdonald	Do.	Rangoon.
Mr. R. A. Scott	Do.	Akyab.
Mr. J. Lince	Vice-Consul	Calcutta.
Bolivia.		
Kumar Shyama Kumar Tagore	Consul-General	Calcutta.
Mr. G. R. Neilson (Ag.)	Vice-Consul	Rangoon.
Brazil.		
Senor M. S. de Saint Brisson Marques	Consul	Calcutta.
Dr. Edward F. Underwood, M.A., M.D., Ph.D., J.P.	Do.	Bombay.
D. Robertson	Vice-Consul	Rangoon.
Mr. C. H. Straker	Do.	Madras.
Mr. V. E. Nazareth	Do.	Karachi.
Chili.		
Senor Don Arturo Cabrera	Consul-General	Calcutta.
Vacant	Vice-Consul	Bombay.
Vacant	Do.	Madras.
Mr. J. G. Bendien (Ag.) on leave	Do.	Bombay.
Mr. A. R. Leishman	Do.	Chittagong.
Mr. William Archbald	Do.	Rangoon.
China.		
Mr. Chow Kwo Hsein	Consul	Rangoon.
Costa Rica.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
Cuba.		
Mr. John Zuberbuhler (Acting) on leave	Honorary Consul	Bombay.
Senor Don B. Martinez Y. Montalvan	Consul	Calcutta.
Denmark.		
Mr. S. G. L. Eustace	Consul-General	Calcutta.
Mr. E. H. Danchell (Acting)	Consul	Bombay.
Mr. E. S. Murray	Do.	Aden.
Mr. R. T. Menzies	Do.	Madras.
Mr. C. Britton (Acting)	Do.	Rangoon.
Vacant	Vice-Consul	Karachi.
Mr. E. P. J. de B. Oakley	Do.	Calcutta.
Mr. P. T. Christensen	Do.	Moulmein.

Name.	Appointment.	Port.
Ecuador.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.
France.		
Monsieur L. E. R. Laronce	Consul-General	Calcutta.
Monsieur J. J. Serre	Vice-Consul	Do.
M. Harold Martin	Acting Consul	Bombay.
M. Adolphe Ries	Consular Agent	Aden.
Mr. T. C. Beaumont (Acting)	Do.	Karachi.
Mr. F. E. L. Worke	Do.	Madras.
Vacant	Do.	Chittagong.
J. Scott	Do.	Rangoon.
Vacant	Do.	Akyab.
Do.	Do.	Coconada.
Do.	Do.	Tellicherry.
Do.	Do.	Do.
Germany.		
The Swiss Consular officers are in charge of German interests during the War.		
Greece.		
Mr. E. S. Petrocchino	Consul	Calcutta.
Guatemala.		
Mr. H. J. Sanders	Consul	Calcutta.
Italy.		
Count G. Violadi Campalto	Consul-General	Calcutta.
Cav. G. Cecchi	Consul	Aden.
Cav. Dr. G. Gorio (on leave)	Do.	Bombay.
Signor A. Pitaxo (in Charge)	Do.	Do.
Mr. J. Meikle	Do.	Rangoon.
Vacant	Vice-Consul	Calcutta.
Signor Alfredo Manzato (on leave)	Do.	Bombay.
Signor V. Cremenaschi	Do.	Aden.
Vacant	Consular Agent	Madras.
Vacant	Do.	Akyab.
Signor Aldo Viola	Do.	Karachi.
Mr. P. McNeill	Do.	Moulmein.
Mr. J. Morton	Do.	Bassein.
Japan.		
Mr. N. Sakenobe	Consul-General	Calcutta.
Mr. Kazue Kuwashima	Consul	Bombay.
Mr. Kenzo Ito, Chancellor .. ..	.....	.....
Liberia.		
Dr. Benode Behari Banerjee	Consul	Calcutta.
Dr. C. H. Freeman Underwood, M.D.	Do.	Bombay.
Mexico.		
Mr. R. L. B. Gall	Consul	Calcutta.

Name.	Appointment.	Port,
Netherlands.		
Mons. P. Staal	Consul-General	Calcutta.
Mr. G. H. Hauer	Vice Consul	Do.
Mons. J. G. Bendien (on leave)	Consul	Bombay.
C. Krook (Acting)	Do.	Do.
Mr. D. van Wijngaarden	Do.	Karachi.
Mr. W. Meek	Do.	Aden.
Mr. F. A. Gaudie	Do.	Akyab.
Mr. M. J. ten Houte de Lange (Ag.)	Do.	Rangoon.
Mr. J. W. Crussha	Do.	Madras.
Mr. A. J. Steiger	Do.	Colombo.
Norway.		
Mr. H. H. T. Fay	Consul-General	Calcutta.
Mr. J. C. Richards (Acting)	Consul	Bombay.
Mr. W. Meek	Do.	Aden.
Mr. H. A. Rees	Do.	Rangoon.
Mr. J. F. Simpson	Do.	Madras.
Captain H. W. Fox	Vice-Consul	Chittagong.
Mr. S. Lucas	Do.	Do.
Mr. S. G. Ritherdon	Do.	Do.
Mr. E. G. Moylan	Do.	Akyab.
Mr. J. Anderson	Do.	Bassein.
Mr. J. McCracken	Do.	Do.
Mr. J. J. Shaw	Do.	Moulmein.
Mr. Vivian Fox (on leave)	Do.	Karachi.
Mr. J. R. Baxter (Acting)	Do.	Do.
Mr. B. Eddington	Do.	Coconada.
Mr. D. W. Gillespie	Do.	Tuticorin.
Persia.		
Mirza Sir Davood Khan Meftahos-Saltaneh, K.C.M.G.	Consul-General	Calcutta.
Kumar Shyama Kumar Tagore	Vice-Consul-General	Do.
Mirza Ali Akbar Khan, B.A., Barrister-at-Law.	Consul	Bombay.
Khan Bahadur Haji Mirza Shujaut Ali Beg ..	Do.	Calcutta.
Khan Bahadur Mirza Abdul Hosain	Do.	Madras.
Mir Ayub Khan	Vice-Consul	Karachi.
Khan Bahadur Mirza Ali Akbar Shirazi ..	Do.	Rangoon.
Vacant	Do.	Moulmein.
Peru.		
Mr. Gilbert B. Hall	Consul	Rangoon
Mr. A. Davenport (in Charge)	Do.	Calcutta.
Portugal.		
Senhor Benito d'Alpoim Torresano Moreno ..	Consul-General	Bombay.
Dr. E. M. D'Souza	Consul	Rangoon.
Senhor A. A. Texeira	Do.	Calcutta.
Mr. D. Meik (Acting)	Do.	Do.
Mr. Shairp	Do.	Colombo.
Mr. Hormusji Cowasji Dinshaw	Do.	Aden.
Dr. F. da Cunha Pinto	Vice-Consul	Bombay.
Dr. A. B. da Fonseca (on leave)	Do.	Karachi.
Dr. L. Castellino (Acting)	Do.	Do.
Dr. A. M. D'Souza	Do.	Rangoon.
James Short	Do.	Madras.

Name.	Appointment.	Port.
Russia.		
W. W. Tomanosky	Consul-General	Calcutta.
Mons. M. Ries (on leave)	Vice-Consul	Aden.
Mr. Adelphe Ries (Acting)	Do.	Do.
R. A. Lissovsky	Do.	Calcutta.
Siam.		
Juang Bhasha Parivatra	Consul-General	Calcutta.
Mr. E. H. Danchell (Acting)	Consul	Bombay.
Mr. E. J. Holberton	Do.	Rangoon.
Mr. C. Van-der-Gucht	Do.	Moulmein.
Spain.		
Senhor L. R. Amoedo	Consul	Bombay.
Mons. L. Grezoux	Vice-Consul	Calcutta.
Mons. M. Ries (on leave)	Do.	Aden.
Mr. Adelphe Ries (Acting)	Do.	Do.
Mr. William Archbald	Do.	Rangoon.
Sweden.		
Lieut.-Col. F. M. Leslie, V.D.	Consul-General	Calcutta.
Mr. E. R. Logan	Consul	Madras.
Mr. L. Volkart	Do.	Bombay.
Mr. A. E. Adams	Do.	Aden.
Mr. W. A. Scholas	Do.	Rangoon.
Mr. T. H. Wheeler	Vice-Consul	Calcutta.
Vacant	Do.	Moulmein.
Switzerland.		
Mr. Charles Ringger	Consul	Bombay.
Turkey.		
The Consular officers for Sweden are in charge of Turkish interests during the war.		
United States of America.		
Mr. James A. Smith	Consul-General	Calcutta.
Mr. C. M. Havwood	Vice-Consul	Calcutta.
Mr. D. F. McClelland	Do.	Madras.
Mr. Lawrence P. Briggs	Consul	Rangoon.
Mr. H. B. Osborn	Vice-Consul	Do.
Mr. Lucien Memminger	Consul	Madras.
Mr. Frank C. Rich	Vice-Consul	Do.
Mr. Walter A. Leonard	Consul	Colombo.
Mr. John A. Nye	Vice-Consul	Do.
Mr. Stuart K. Lupton	Consul	Bombay.
Mr. Lawton Miller	Vice-Consul	Do.
Mr. E. V. Richardson	Consul	Karachi.
Mr. Addison E. Southard	Do.	Aden.
Mr. H. W. Timewell	Consular Agent	Busráh, Persian Gulf.
.....	Do.	Chittagong.
Uruguay.		
Mons. C. Jambon	Consul	Calcutta.
Venezuela.		
Kumar Shyama Kumar Tagore	Consul	Calcutta.

The Army.

The great sepoy army of India originated in the small establishments of guards, known as peons, enrolled for the protection of the factories of the East India Company; but sepoys were first enlisted and disciplined by the French, who appeared in India in 1665. Before this detachments of soldiers were sent from England to Bombay, and as early as 1665 the first fortified position was occupied by the East India Company at Armagon, near Masulipatam. Madras was acquired in 1640, but in 1654 the garrison of Fort St. George consisted of only ten men. In 1661 Bombay was occupied by 400 soldiers, and in 1668 the number was only 285 of whom 93 were English and the rest French, Portuguese, and natives.

After the declaration of war with France in 1744 the forces were considerably increased, but this did not prevent the French capturing Madras in 1746. Following the French example, the English raised considerable sepoy forces and largely increased the military establishments. In 1748 Major Stringer Lawrence landed at Fort St. David to command the forces of the Company. The English foothold in India was then precarious and the French under Dupleix were contemplating fresh attacks. It became necessary for the English Company to form a larger military establishment. The new commandant at once set about the organisation and discipline of his small force, and the garrison was given a company formation. This was the beginning of the regular Indian Army of which Lawrence subsequently became Commander-in-Chief. In Madras the European companies were developed into the Madras Fusiliers; similar companies in Bengal and Bombay became the 1st Bengal and 1st Bombay Fusiliers. The native infantry were similarly organised by Lawrence and Clive. By degrees Royal Regiments were sent to India, the first being the 39th Foot, which arrived in 1754.

Struggle with the French.—From this time for a century or more the army in India was engaged in constant war. After a prolonged war with the French, whom Dupleix had by 1750 raised to the position of the leading power in India, the efforts of Stringer Lawrence, Clive, and Eyre Coote completed the downfall of their rivals, and the power of England was established by the battle of Plassey in Bengal; and at Wandewash in Southern India, where the French were finally defeated in 1761. A number of independent States, owing nominal allegiance to the Emperor at Delhi, had risen on the decline of the Mughal Empire, some ruled by Mahratta Princes and others by Musalman adventurers such as Hyder Ali of Mysore. A prolonged struggle ensued with the latter and his son and successor Tipu Sultan, which ended only with the defeat and death of Tipu and the capture of Seringapatam in 1799.

Reorganisation of 1798.—In 1796 the native armies, which had been organised on the Presidency system, were reorganised. The European troops were 13,000 strong and the natives numbered some 67,000, the infantry being generally formed into regiments of two

battalions each. In Bengal regiments were formed by linking existing battalions of ten companies each with large establishments of English officers. The Madras and Bombay armies were at the same time reorganised on similar lines, and cavalry and artillery companies were raised.

In 1798 the Marquis Wellesley arrived as Governor-General, firmly imbued with the necessity of destroying the last vestiges of French influence. In pursuance of this policy he reduced Mysore, where Tipu was intriguing with the French, and then turned his attention to the Mahratta States, in which Sindhia had established power over the Mughal Emperor at Delhi by means of a large regular army officered by Europeans under the French adventurer Perron. In campaigns against Sindhia in Hindustan by a British Army under General Lake, and in the Deccan against that prince and the Raja of Berar by an army under General Wellesley, afterwards Duke of Wellington, the power of these Chiefs was broken in the battles of Laswari and Assaye. French influence was finally destroyed, and the Mughal Emperor was released from the domination of the Mahrattas. Subsequently Holkar also was reduced, and British power established on a firm footing.

Mutiny at Vellore.—The Indian Army had been from time to time subject to incidents of mutiny which were the precursors of the great cataclysm of 1857. The most serious of these outbreaks occurred at the Fort of Vellore in 1806 when the native troops suddenly broke out and killed the majority of the European officers and soldiers quartered in the fort, while the striped flag of the Sultan of Mysore, whose sons were confined there, was raised upon the ramparts. The mutiny was suppressed by Colonel Gillespie, who galloped over from Arcot at the head of the 19th Light Dragoons, blew in the gate of the fort, and destroyed the mutineers. This retribution put a stop to any further outbreaks in the army.

Overseas expeditions.—Several important overseas expeditions were undertaken in the early part of the nineteenth century. Bourbon was taken from the French; Ceylon and the Spice Islands were wrested from the Dutch, and Java was conquered in 1811 by a force largely composed of Bengal troops which had volunteered for this service.

In 1814 the Nepal War took place in which the brave Gillespie, who had distinguished himself in Java, was killed when leading the assault on the fort of Kalunga. The Gurkhas were overcome in this war after offering a stout resistance.

In 1817 hostilities again broke out with the Mahrattas, who rose against the British during the progress of operations against the Pindaris. Practically the whole army took the field and all India was turned into a vast camp. The Mahratta Chiefs of Poona, Nagpur, and Indore rose in succession, and were beaten respectively at Kirki, Sitabaldi, and Mehidpur. This was the last war in Southern India. The tide of

war rolled to the north never to return. In the Punjab, to which our frontier now extended, our army came into touch with the great military community of the Sikhs.

In 1824 the armies were reorganised, the double-battalion regiments being separated, and the battalions numbered according to the dates they were raised. The Bengal Army was organised in three brigades of horse artillery, five battalions of foot artillery, two regiments of European and 68 of native infantry, 5 regiments of regular and 8 of irregular cavalry. The Madras and Bombay armies were constituted on similar lines, though of lesser strength.

First Afghan War and Sikh Wars.—

In 1839 a British Army advanced into Afghanistan and occupied Cabul. There followed the murder of the British Envoys and the disastrous retreat in which the army perished. This disaster was in some measures retrieved by subsequent operations, but it had far-reaching effects on British prestige. The people of the Punjab had witnessed these unfortunate operations, they had seen the lost legions which never returned, and although they saw also the avenging armies, they no longer regarded them with their former eyes. Sikh aggression led to hostilities in 1845-46, when a large portion of the Bengal Army took the field under Sir Hugh Gough. The Sikhs were defeated after stubborn fights at Mudki and Ferozeshahr, the opening battles, but did not surrender until they had been overthrown at the battles of Aliwal and Sobraon. Two years later an outbreak at Multan caused the Second Sikh War when, after an indecisive action at Chillianwala, our brave enemies were finally overcome at Gujrat, and the Punjab was annexed. Other campaigns of this period were the conquest of Sind by Sir Charles Napier, and the Second Burmese War, the first having taken place in 1824.

The conquest of the Punjab extended our frontier to the country inhabited by these turbulent tribes which have given so much trouble during the past sixty years while they have furnished many soldiers to our army. To keep order on this border the Punjab Frontier Force was established, and was constantly engaged in small expeditions which, while they involved little bloodshed, kept the force employed and involved much arduous work.

The Indian Mutiny.—On the eve of the mutiny in 1857 there were in the Bengal Army 21,000 British and 137,000 native troops; in the Madras Army 8,000 British and 49,000 native troops; and in Bombay 9,000 British and 45,000 native troops. The proportion of native to British was therefore too large for safety. The causes of the mutiny were many and various. Among these were the annexation policy of Lord Dalhousie, especially that of Oudh from which the greater part of the Bengal Army was drawn; interference with the privileges of the sepoy with respect to certain allowances; and lack of power on the part of commanding officers either to punish or reward. The final spark which fired the revolt was the introduction of a new cartridge. The muskets of those days were supplied with a cartridge in which the powder was enclosed in a paper cover, which had to be bitten off to expose the

powder to ignition. In 1857 a new cartridge was introduced with paper of a glazed texture which it was currently reported was greased with the fat of swine and oxen, and therefore unclean alike for Muhammadans and Hindus. This was interpreted as an attempt to destroy the caste and the religion of the sepoys. Skilful agitators exploited this grievance, which was not without foundation, and added reports that flour was mixed with bone-dust and sugar refined with the blood of oxen.

Disaffection culminated in mutiny at Barrackpore and in an outbreak at Barrackpore where sepoy Mangal Pande attacked a European officer. The next most serious manifestation was the refusal of men of the 3rd Bengal Cavalry at Meerut to take the obnoxious cartridge. These men were tried and sentenced to long terms of imprisonment, their fetters being rivetted on parade on the 9th May. Next day the troops in Meerut rose, and, aided by the mob, burned the house of the Europeans and murdered many. The troops then went off to Delhi. Unfortunately there was in Meerut no senior officer capable of dealing with the situation. The European troops in the place remained inactive, and the mutineers were allowed to depart unmolested to spread the flames of rebellion.

Delhi is the historic capital of India. On its time worn walls brood the prestige of a thousand years of Empire. It contained a great magazine of ammunition. Yet Delhi was held only by a few native battalions, who joined the mutineers. The Europeans who did not succeed in escaping were massacred and the Delhi Emperor was proclaimed supreme in India. The capital constituted a nucleus to which the troops who mutinied in many places flocked to the standard of the Mughal. An army was assembled for the recovery of Delhi but the city was not captured until the middle of September. In the meantime mutiny had spread. The massacres of Cawnpore and Jhansi took place, and Lucknow was besieged until its relief on the 27th September. The rebellion spread throughout Central India and the territory that now forms the Central Provinces, which were not recovered until Sir Hugh Rose's operations in 1858 ended in the defeat of the Rani of Jhansi.

Re-organisation after the Mutiny.—After the mutiny the Government of India was assumed by Queen Victoria and the East India Company ceased to exist. The Company's European regiments were transferred to the Crown. The Bengal Army had almost disappeared and while a new army was raised for that Presidency the Madras and Bombay Armies were also reorganised. The native artillery was abolished, only mountain batteries and some field batteries of the Hyderabad Contingent being maintained. A Staff Corps of officers, borne on a general list for each Presidency, was instituted. The total strength on re-organisation was 65,000 British and 140,000 native troops.

Minor Campaigns.—During the period until 1879, when the Second Afghan War began, there were many minor campaigns including the China War of 1860, the Ambeyla Campaign, and the Abyssinian War. Then followed the Afghan War in which the leading figure was

Lord Roberts. There were expeditions to Egypt and China, and Frontier Campaigns of which the most important was the Tirah Campaign of 1897. There were also the prolonged operations which led up to or ensued upon the annexation of Burma, several campaigns in Africa, and the expeditions to Lhasa. But until 1914, since the Afghan War, the army of India, except that portion of the British garrison which was sent to South Africa in 1899, had little severe fighting, although engaged in many arduous enterprises.

Reforms.—During the period under review up to 1914 many reforms took place. Races considered of inferior military value were eliminated, their places in the ranks being taken by the warlike classes of the north. In this manner the greater part of the old Madras and Bombay armies lost its identity. Class regiments and class companies were formed, and regiments were linked in threes, each group with a regimental centre. Imperial Service troops were raised by the Chiefs for the service of the paramount power. In 1891 the Staff Corps of the three Presidencies were amalgamated, and in 1893 the appointment of Commander-in-Chief in the Bombay and Madras Armies was abolished. The number of British officers serving in Indian regiments was progressively increased, until the establishment was raised to 13 or 14, after having at one period sunk as low as 8 per battalion. The administrative services were improved, the Supply and Transport and the Ordnance and Military Works Services being reorganised.

Reforms received a great impetus during the term of office as Commander-in-Chief of **Lord Kitchener**, who arrived in India at the end of 1902. There had hitherto been no General Staff in India, all Staff work being carried out under orders issued from the offices of the Adjutant General and the Quartermaster General. The administrative services were under the Military Member of Council, who was independent of the Commander-in-Chief, who had to submit through the Military Member all proposals involving financial expenditure beyond his very limited powers. Lord Kitchener wished to remove what he considered the obstruction of the Military Department of the Government of India, and bring the entire army administration under the Commander-in-Chief. The proposal to abolish the Military Department was opposed by **Lord Curzon**, the Governor-General, who eventually resigned rather than assent to measures which he considered to be not in the best interests of the State. In place of the Military Department, a Military Supply Department was instituted with reduced powers, but this soon disappeared and an Army Department under control of the Commander-in-Chief in his capacity as Member of Council was established in its place.

Lord Kitchener's chief work lay in the reorganisation of the Army which was not based on war conditions but was scattered in units from which formations were organised for service. Nine Divisions were now formed, in addition to the Burma Division. These Divisions were organised for war, and could take the field intact, leaving behind sufficient troops for internal security. Armies and Divisions are

distributed strategically with their Headquarters at the stations indicated:—

<i>Northern Command</i>	..	..	Murree.
1st Division	..	..	Peshawar
2nd "	..	..	Rawalpindi.
3rd "	..	..	Lahore.
7th "	..	..	Meerut.
8th "	..	..	Lucknow.

Independent Brigades—

Derajat Brigade	..	..	Bannu.
Kohat Brigade	..	..	Kohat.
<i>Southern Command</i>	..	..	Poona.
4th Division	..	..	Quetta.
5th "	..	..	Mhow.
6th "	..	..	Poona.
9th "	..	..	Bangalore.
<i>Independent Brigade</i>	..	..	Bombay.
<i>Burma Division</i>	..	..	Mandalay.

The fighting races.—The fighting classes that contribute to the composition of the Indian Army have hitherto been drawn mainly from the north of India, but the experiences of the great war have caused some modifications in the opinions previously held as to the relative value of these and other fighting men. The numbers of the various estates and tribes enlisted in the Army have since the war undergone fluctuations, and it is not possible at present to give exact information as to their proportions. Previous to the war the Sikhs contributed very large numbers both to the cavalry and infantry, and the contribution of the Gurkhas was also large; it is probable that these classes preserve their preponderance. The Sikhs, who inhabit the Punjab originated in a sect founded near Lahore by a peasant in the early part of the sixteenth century and in the course of a hundred years grew into a formidable militant power. Muhammadans of various races contribute a still larger proportion to both the cavalry and infantry. These are drawn both from the north and the south of India, as well as from beyond the Frontier. They are all excellent fighting men, hardy and warlike, who have furnished soldiers to all the great powers of India for many hundreds of years. As cavalry the Muhammadans are perhaps unequalled by any other race in the East, being good horsemen and expert men-at-arms.

Next in point of numbers are the Gurkhas of Nepal, who were at the outbreak of war formed in twenty complete battalions, but these have been considerably increased. As fighters in the hills they are unsurpassed even by the Pathans of the North-West Frontier, but the Garhwalis are equally good mountaineers.

The professional military caste of India from time immemorial has been the Rajput, inhabiting not only Rajputana but the United Provinces and Oudh. Of fine physique and martial bearing, these warriors of Hindustan formed the backbone of the old Bengal Army, and have sustained the English flag in every campaign in the East. Their high caste and consequent prejudices in no respect interfere with their martial instincts and efficiency in war. They furnish

many battalions. The Garhwalis are Hill Rajputs, good and gallant soldiers, who have proved themselves equal to any other troops on the field of battle and have established an imperishable record in the war both in Europe and in the East. The two battalions which were all we had in 1914 have since been added to. The Jats are a fine and warlike race of Hindus found in the Delhi and Rohtak districts and adjoining territory. It was these people who held out so bravely at Bharatpur and repelled Lord Lake's army in 1805. They have proved themselves good soldiers on the battlefields of Europe. Dogras are good and steady soldiers found in the hilly districts of the Punjab. They fought well in Flanders and in Mesopotamia.

Among those who have rendered signal and gallant service in the war are the Mahrattas of the Deccan and the Konkan, who have revived the reputation held by their race in the days of Shivaji, the founder of the Mahratta Empire. It is probable that their proved efficiency in war will lead to their recruitment in larger numbers in future.

In addition to the castes that have been mentioned, low caste men from the south and other parts of India have filled the ranks of the Pioneer regiments and Sappers and Miners, and done their duty well in every campaign in which they have been engaged.

The Indian Army in the Great War.—

During the hundred and fifty years of its existence the Indian Army had taken no part in a European War with the exception of some few troops who were engaged against the French in Southern India and in Java and the Spice Islands. In 1885 some troops had been sent as far as Malta with a view to their employment in case of a war with Russia. In the last Boer war many Indians had been employed in a non-combatant capacity, but for reasons of policy their activity was confined to services of that nature. The Indian Army had been organised and trained mainly for Eastern warfare on or beyond the frontier of India; their despatch to a European theatre of war had not been contemplated, and the only European enemy they had been prepared to meet were the Russians. The army as a whole was organised and strategically disposed with a view to taking the field against the Russians in Central Asia, and the change in the situation due to the Anglo-Russian agreement with regard to Afghanistan and Persia did not bring with it any change in military policy, except possibly that it made the Financial Department draw still tighter the purse strings and curtail still further the military estimates.

Yet, notwithstanding these circumstances within a few months of the outbreak of war a great army estimated to reach 200,000 men was despatched to the various theatres of war—to France and Belgium, East Africa, Egypt, Turkish Arabia and Shantung. This Army, in its Indian ranks, comprised representatives of all the fighting races that have been mentioned and included a force of Imperial Service troops.

In July 1917, Lord Hardinge made the following statement in the House of Lords showing the extent of the expeditionary forces sent from India.

"In August and the early part of September an Indian Expeditionary Force of an Indian army corps of two divisions, under the command of General Sir James Willcocks, and one cavalry division was sent to France, and a second cavalry division was sent to join this force in the following November. It may be of interest to remark here that the theatre of action of these splendid Indian divisions was, in the first instance, restricted to the Mediterranean garrisons and the Sudan, and it was due to the insistence of the Government of India that they were sent to France, where they arrived in time to fill a gap that could not otherwise have been filled, and there consecrated with their blood the unity of India with the British Empire and their loyalty to the King Emperor. There are very few survivors of those two splendid divisions of infantry. But India has a land frontier, needing at all times a watchful eye, and at times such as those giving cause for special care. To guard that frontier three divisions were immediately mobilised. In September 1914, by the order of His Majesty's Government, a mixed division of troops was sent to East Africa, the co-operation of India with this force being limited to the supply of personnel, transport, equipment and ships. In October and November 1914, two divisions of Indian infantry and one brigade of cavalry were sent to Egypt. It was not till September, 26, 1914, by which time eight divisions had already been mobilised and sent either abroad or to the frontier, that the possibility of action at the head of the Persian Gulf was foreshadowed by the Secretary of State, and it was on October 31 that Turkey having entered the war against us, hostilities commenced with the seizure by an Indian brigade of the mouth of the Shatt-el-Arab. This brigade was reinforced to the strength of a division before the capture of Basra on November 23 and in three months' time increase to an army corps of two divisions. Of these 10 divisions of infantry and two divisions and two brigades of cavalry, enumerated above, seven divisions and all the cavalry were sent overseas. But in addition to these organised forces 20 batteries of artillery, and 32 battalions of British infantry, the flower of the British army, many of them 1,000 strong and more, were sent to England. A battalion of Indian infantry was sent to Mauritius, another to the Cameroons, and two battalions to the Persian Gulf, while Indian troops also co-operated with the Japanese at the capture of Tsingtau. Approximately 80,000 British officers and men and 210,000 Indian officers and men, all fully trained and equipped were despatched overseas. I would here remark that the largest Indian expedition ever previously sent overseas amounted to 18,000 men.

"A comparison between the ordinary establishment of the Army in India and of the units sent overseas in connexion with various expeditions shows in a striking manner the military effort made by India to assist the Empire. Of the British establishment in India, seven regiments of British cavalry out of nine were sent overseas: 44 British battalions of infantry out of 52, and 43 batteries of Royal artillery out of 56; while of the Indian establishment, 20 regiments of Indian cavalry out of 39 and 98 battalions of Indian infantry out of 138 were

sent abroad. In return for these troops, India received many months after the outbreak of war and the despatch of Indian divisions overseas, 29 Territorial batteries and 34 Territorial battalions, but these were unfit for immediate employment on the frontier or in Mesopotamia until they had been entirely rearmed and equipped and their training completed. Many of them were sent later to Mesopotamia, whether as units or drafts for Regular regiments, and all did splendid service. It is, however, a fact that for the space of some weeks before the arrival of the Territorials the British garrison in India was reduced to about 15,000 men. The safety of India was thus imperilled in the interests of the Empire as a whole. In such a cause I was naturally prepared to take risks, and I took them confidently because I trusted the people of India, and I am proud to say they fully justified my confidence in them. From the moment of the outbreak of war, and after, it was the steady policy of the Government of India to give readily to the home Government of everything it possessed, whether troops or war material. In the summer of 1914 India was absolutely ready for war in the light of what was then accepted as the requisite standard of preparation of her military forces and equipment. The Army was at war strength, the magazines were full, and the equipment was complete. Thanks to these facts, India was able, not merely to send her divisions to France and elsewhere, but also to supply to England within the first few weeks of the war 70,000,000 rounds of small-arm ammunition, 60,000 rifles and more than 550 guns of the latest pattern and type. In the first week of the war some 530 officers of the Army, who could ill be spared, were handed over to the War Office, and nearly 3,000 additional combatant officers have been sent overseas since the war began."

The Western Front.—The Germans had expected a rising in India, not the rallying of our Eastern Empire to the Flag. They had, in common with politicians elsewhere and in other countries taken at their face value the opinion of the most vociferous agitators, and mistaken it for the voice of the people of India. These agitators did not drop out of sight and hearing, either on the outbreak of war or during its continuance, but their machinations had no effect on the masses of the country, on the Princes who sprang to arms, and on the Army which remained true to its salt and upheld on the field of battle their traditions and character for loyalty.

The Indian Army Corps comprising the Lahore and Meerut Divisions, left India in August and September 1914, and on the 21st October the Lahore Division entered the battle area in the vicinity of Ypres. The position was critical and the arrival of reinforcements from India was timely. On this day the Germans began an offensive along nearly the whole front from La Bassee to the south of Menin.

A detailed account of the part taken by the Indian troops on the Western Front will be found in the book entitled "The Indian Corps in France," published under the authority of the Secretary of State for India. It is here possible only to refer briefly to the operations

in which they participated. The first battalions to enter the trenches in a European theatre of war were the 57th Rifles and the 129th Baluchis, which were attached to the 2nd Cavalry Division south-west of Ypres. These battalions took part in an attack on the German line on the 26th October, when both suffered some loss. A few days later a company of Punjabi Muhammadans of the 57th lost heavily in a German attack. The battalion was a typical one containing also Sikhs, Dogras, and Afridis, who all fought well. Severe fighting took place at this portion of the line up to the first of November. It is noteworthy that the first Victoria Cross awarded to an Indian was won in this battle by sepoy Khudadad Khan, 129th Baluchis. The Indian Army had been made eligible for the Cross only in 1911.

During this period three other battalions of the Lahore Division—the 15th Sikhs, 34th Sikh Pioneers and 59th Rifles—were in action near Givenchy on the **La Bassee Canal**. This they held in the heavy fighting that continued until the 1st November, when they were relieved by two other battalions of the Jullunder Brigade, including the 47th Sikhs.

On the 26th and 27th October the Germans had effected the capture of the village of **Neuve Chapelle** and as this made a bulge in the British line it was necessary to recapture the village. The 9th Bhopal Infantry, 47th Sikhs, and two Companies of the Bengal Sappers and Miners were accordingly moved up on the night of the 27th and attacked the Germans next day. Desperate fighting ensued in which the Indian Infantry distinguished themselves and the Sappers and Miners maintained their high reputation. The casualties among the Indian troops up to the 3rd November numbered 18 British officers and 1,364 men wounded, 139 men killed; 28 British officers and 1,364 men wounded, 8 British officers and 338 men missing. The high proportion of wounded is a remarkable feature of the casualty list.

The Meerut Division did not leave India until September. It was concentrated at Orleans by the 22nd October, and a week later on the night of the 29th October the Indian Army Corps took over the line from just north of **Givenchy** in the south, past the rear of **Neuve Chapelle**, and eastward to the north of **Fremelles**. With the Corps was the Secunderabad Cavalry Brigade. The state of the swampy and waterlogged ground might alone have damped the ardour of troops coming from the warmth and sunshine of the East. But these troops, who in loyalty and devotion to the King are second to none carried out during the succeeding ten months that they remained in the field the arduous duties they were called upon to perform, and at a time when there were not enough British troops available they filled the gap and held the line. Soon after the line was taken over the 28th Gurkhas were attacked and the Germans were eventually able to force their part of the front after inflicting heavy losses on this battalion. In a counter-attack the 58th Rifles and 107th Pioneers, aided by some British troops, succeeded in retaking the lost trenches.

The 12th November was memorable for the visit of Field Marshal Earl Roberts who visited

and addressed the Indian troops whose predecessors had served under him in many campaigns. Three days later the old Field Marshal died within sound of the guns in the midst of the troops that he had loved so well. Trench warfare in which Gurkhas, Garhwalis, Jats and Sappers and Miners were all engaged continued until the opening of the action of **Festubert** which the enemy began with an attack on Indian troops on the 23rd November. This action continued with varying fortunes for 48 hours. In the early part of the action the Germans succeeded in forcing a considerable portion of the trenches held by the Indian troops. But by the end of the second day all the lost ground had been recovered and the situation restored though at the cost of heavy losses in officers and men. The 39th Garhwalis were engaged for the first time and gained the reputation as being second to no Indian troops which they have since enhanced on many a field. The Victoria Cross was won by Naik Darwan Singh Negi of the 1st Battalion of this regiment, and by Captain de Pass of the Poona Horse, who was unfortunately killed. The 6th Jats and the 9th Bhopal Infantry also did well, and the other Corps fought with their usual tenacity. On the 1st December the Indian Corps was visited by the King, and the men were greatly encouraged by the Royal presence. Trench warfare continued and on the 11th-12th December the Jullunder Brigade relieved the French at Givenchy and Cuinchy. There followed the Battle of **Givenchy**, which began with a raid by the 129th Baluchis on the 16th December when that regiment behaved with great gallantry. In pursuance of somewhat vague indefinite, and conflicting orders of the higher command the battle continued during several days and assisted in the attack by the Leicestershire Regiment, the Indian troops of the Meerut Division carried out some excellent work with small losses. At the same time the Lahore Division attacked the main line of German trenches in front and north-east of Givenchy, the 59th Rifles doing specially good work and suffering heavy losses in a night attack on the 19th December. Much ground had been gained during the day, but most of this was lost at night in the fight with greatly superior numbers of Germans.

These operations were followed by very heavy fighting during a German counter-attack on Givenchy. The Secunderabad Cavalry Brigade, dismounted, were thrown into the fight, and the line occupied by the Indian troops in spite of strenuous resistance, was forced at least one point. Among the many who gained distinction in this battle was Subadar Arsla Khan of the 57th Rifles, who had distinguished himself in Frontier warfare. In his despatch on the Givenchy operations Sir John French wrote that "The Indian troops have fought with the utmost steadfastness and gallantry wherever they have been called upon."

The Indian Army Corps had now, at the end of December, been continuously engaged for two months. They had suffered a loss of nearly ten thousand killed, wounded and missing, including in this number the gallant British regiments which formed a portion of each Brigade, and they were in urgent need of rest.

They were accordingly moved into billets, where the time was occupied with training and refitting until the 15th January 1915 when Indian troops were again moved into the front line; but there was not much activity until the battle of Neuve Chapelle, which began on the 10th March. In this attack the Indian Corps co-operated with the 4th Corps, the Meerut Division, comprising over five thousand British and six thousand five hundred Indian ranks supplying the assaulting troops from their Corps, in co-operation with a Division of the 4th Corps.

The attack began with a heavy bombardment after which the assaulting troops in which the Indian Army supplied the 2-3rd Gurkhas and two battalions of the 29th Garhwal Rifles, rushed to the attack and rapidly attained their immediate objectives. In this attack Rifleman Gobar Singh Negi of the Garhwalis displayed great gallantry; he was unfortunately killed and was awarded posthumously the Victoria Cross. The British officers as usual led their men with great gallantry, and suffered disproportionate losses. At one portion of the front the 1-39th Garhwal Rifles were for a time held up, but succeeded in carrying their objective with the aid of reinforcements but at terrible cost. The positions gained were consolidated on the 11th and 12th March. **Neuve Chapelle** was cleared of the enemy and other Indian troops were moved forward. On the morning of the 12th the enemy massed to the counter-attack, but were shot to pieces before they reached the trenches of the defenders; a second attempt met with the same fate.

The battle of Neuve Chapelle ended on the 12th March when the operations were suspended and the position gained was consolidated. It was not an entire success, but the balance of heavy losses was on the side of the enemy and a dangerous salient was obliterated. The remainder of the month passed with little activity except shelling, and on the 21st the Indian Corps was directed to take over a new line in relief of the 4th Corps. The first part of April was uneventful, but towards the end of the month the Lahore Division was moved to the Ypres Front to take part in the **Second Battle of Ypres**. On the 25th April, after a long march, the Division moved into the Ypres area to take part in the battle which began with the German attack on the French line between Steenestraat and the East of Langemark, and in which the enemy for the first time used asphyxiating gas. This attack forced back the Allied line and so jeopardised the situation that every effort had to be made to arrest the German advance. It was in pursuance of this necessity that the Indian Division was sent into the fight, and came under the orders of Sir Horace Smith-Dorrien, Commanding the 2nd Army, and took up, on the morning of the 26th April, a position in front of Ypres with its left on the Ypres-Langemark road.

In the assault on the enemy's position the same day the 49th Pathans, 47th Sikhs, 129th Baluchis, and 57th Rifles pressed forward in spite of heavy losses, but were eventually forced back by a gas attack against which they had no provision. In this action Jemadar Mir Dast

behaved with great skill and gallantry and was rewarded with the Victoria Cross. The troops which delivered the assault composed the Ferozepore and Jullundur Brigades, the latter being relieved next day by the Sirhind Brigade. The 15th Sikhs and the 1st and 1-4th Gurkhas, and the Bhopal Battalion, as well as those already mentioned came into action next day, and heavy fighting, alternate attack and defence, continued until the end of April. The division remained on this front until the 3rd May. The defence of Ypres was successfully maintained, and the troops did all that was humanly possible under most trying circumstances. General Keary, who commanded the division stated that the carrying of the enemy's position was only prevented by their use of asphyxiating gases. Two days after their return from the battlefield, the Lahore Division relieved the Meerut Division in the trenches. The casualties in the British and Indian troops of the Indian Army Corps amounted to nearly 19,000 men up to the 1st May.

Throughout the month of May fighting was almost continuous, but the principal event was the battle of **Festubert** on the 9th to 11th May. This action was fought to support a French offensive further south. It opened with an attack by a Brigade of the Indian Corps, which failed owing to the strength of the enemy's position and insufficient artillery preparation. After terrible fighting in which the troops did all that was possible and suffered heavy casualties, the Indian Corps failed to attain its objec-

tive. Where all fought well it is invidious to pick out any particular units, but none did better than the 37th and 41st Dogras. The 41st had 401 casualties out of 645 engaged.

Early in June the 69th and 89th Punjabis arrived in relief of the 9th Bhopal Infantry and 125th Rifles which left for Egypt, and in this month the Corps was strengthened by the addition of Territorial Divisions, so that the Indian troops were now in the minority. There succeeded desultory operations until the **Battle of Loos** in which the Indian Corps, now under command of Lieutenant-General Sir Charles Anderson, who succeeded Sir James Willcocks took a prominent part. It is not possible in the space at our disposal to give any account of this battle, in which the Indian troops did their best in very adverse circumstances. They formed a comparatively small portion of the troops engaged, and it was no fault of those troops that the attack failed. In his despatch describing the operations Sir John French stated that the Indian Corps succeeded admirably in fulfilling the role allotted to them, and in holding large numbers of the enemy away from the main attack.

The difficulty of keeping the Indian Corps troops up to strength in both officers and men had led to their gradual deterioration, and in November they were moved from the Western Front, with the exception of the cavalry to other theatres of war. The last of them left Marseilles on the 26th December, 1915.

MESOPOTAMIA.

When in September 1914 it became evident that the Turks would enter the war on the side of our enemies it was decided to send an expedition to occupy Basra. The advanced Brigade under General Delamain reached Bahrein on the 23rd October, and the remainder of the 6th Division, which comprised the Expeditionary Force under Sir Arthur Barrett, arrived on the 14th November. Basra was occupied on the 22nd November. The advanced Brigade consisted of the 2nd Dorsets, 20th Punjabis, 104th Rifles and 117th Maharattas, with two Mountain Batteries. They occupied the oil refinery at Abadan without much opposition. The remainder of the Poona Division under General Barrett were two Brigades and divisional troops. The Ahmednagar Brigade was composed of the Oxford and Bucks Light Infantry, the 119th Infantry, and 103rd Maharattas.

The Belgaum Brigade consisted of the 2nd Norfolks, 7th Rajputs, 110th Maharattas, and 120th Rajputana Infantry. Divisional troops were the 33rd Light Cavalry three batteries R. F. A., 48th Pioneers, and 3rd Sappers and Miners. On the 15th November the Poona Brigade under General Delamain was sent forward and engaged and drove out of the village of Sahain. The Turks stood again at Sahil on the 17th, and were defeated with heavy loss after a sharp action in which the British

casualties numbered about 400. After this the Turks evacuated Basra. After some further fighting in December the Town of **Kurna** at the junction of the Tigris and Euphrates was occupied on the 7th of that month, when the Turkish Garrison surrendered unconditionally. This gave us complete control of the Delta.

In January 1915 it was found advisable to push out a force from Kurna to break up a hostile gathering to the northward, and some fighting took place in which the 33rd Cavalry was distinguished. In February more severe fighting took place. The town of Ahwaz in Persia had been occupied by a brigade of all arms to protect the oil wells. The Turks collected a force of 12,000 men to the westward, and a reconnaissance in force sent out from Ahwaz had some severe fighting and withdrew with difficulty. On the same day a cavalry force from Basra encountered the enemy at Nakhaila 25 miles up the Euphrates. In April Sir John Nixon took over command in relief of Sir Arthur Barrett and a period of activity followed. Active measures were taken against the enemy on the Karun and the Tigris, and during seven weeks the Turks were pushed back to Amara and several Arab tribes were dealt with. By the end of May the British had pushed forward to Kurna and a division 14,000 strong under General Townshend was

ready for a further advance. On the 31st May the Turks were driven further up the river by a strong attack, and on the 3rd June General Townshend occupied Amara, where 2,000 prisoners were taken. In June a force under General Gorringe was concentrated at Kurna, and on the 27th pushed westwards towards **Nasiriyeh**. The Turks were intrenched in front of the place; they were attacked and driven out of their position on the 24th July, and next day Nasiriyeh was occupied. The line had now been pushed forward on the Tigris and the Euphrates a hundred miles beyond Kurna.

A further advance began in August, and at the end of September after hard fighting culminating in the battle of **Kut**, that place was occupied by the troops under General Townshend. In all these and the subsequent operations many battalions of the Indian Army took part. To name all these would be to recapitulate the Army List. They belonged to all classes of troops, among which the Mahratta regiments in particular performed good and gallant service. It was decided to push on from Kut and attempt the capture of **Baghdad**, by water 227 miles beyond Kut. For this purpose only General Townshend's division was available. That General told Sir John Nixon that, in case of success at Kut, he would "take the risk of pushing on to Baghdad at the heels of the rout." This decision was taken in defiance of all strategic principles, and apparently only with a view to the immediate tactical situation on the spot. Townshend pushed on to Azizieh which he reached on the 3rd October. Here he appears to have had doubt as to the advisability of an advance on Baghdad without reinforcements. As these were expected from Europe, the advance was continued. The Turks had intrenched a position at **Ctesiphon**, where a bloody and indecisive battle was fought on the 23rd November. The British losses were very heavy, and though the enemy lost no less he brought up reinforcements and instead of an advance to Baghdad it became necessary to retreat. On the 20th General Townshend withdrew to Lajj; on the 27th he began his retreat to Kut. The Turks followed. As might have been expected they pushed round the flanks of the retreating force. But the pursued turned on their pursuer and the enemy were kept at a distance while the troops fell back on Kut which was occupied on December 3rd. Here the retreat ended. The wounded were sent back in circumstances of horror which fill one of the darkest pages of our history, owing to the lack of proper medical and transport arrangements. For this the General Staff at Simla appear mainly responsible in miscalculating probable casualties in such a war. Before the Turkish investment was complete, General Townshend wisely sent his cavalry brigade to the south, and behind this force were concentrated for the **Relief of Kut**. But it was not until the 4th January 1916 that the advance of relief forces under General Aylmer began. He had some 25,000 men, but the Turks also had been considerably reinforced. They were attacked at Shaikh Saad on the 7th January, and on the 9th, after very severe fighting, they were driven beyond

that place to a position about 25 miles from Kut. Here they were again attacked and defeated on the 13th January, but they only retreated to a stronger position a few miles further back, where they repulsed an attack delivered by General Aylmer's troops a week later. This ended the first attempt to relieve Kut, where the besieged held out and repelled all assaults, and maintained their moral notwithstanding the necessity of putting them on halt rations.

In January General Lake took over command of the troops in Mesopotamia, but it was not until the 7th March that General Aylmer made a third attempt to relieve the besieged garrison. On this occasion the attack was well-planned but delay in its delivery gave the Turks time to prepare and the operation failed with heavy losses. A third attempt failed in April and on the 29th of that month General Townshend was obliged to surrender to the Turks.

During the summer of 1916 the river transport and railway and other communications were organised, and large reinforcements were sent to Mesopotamia, so that when General Maude succeeded Sir Percy Lake in command the situation had in these respects greatly improved. The expedition was placed under control of the War Office.

When General Maude began his advance in December the Turks occupied a position covering Kut at **Sanna-i-Yat** and southward of the Tigris to the Hai stream. The Turks were attacked on the Hai on the morning of the 14th, when the passage of the stream was seized. Activity continued, and in the middle of January after heavy fighting they were driven from positions south of the Tigris. On the 25th January an assault was delivered on the Hai salient and a succession of actions took place between that date and the end of February, Kut being cleared of the enemy and captured on the 23rd and 24th. The pursuit then began which, except for a halt of a week at Azizieh, did not end until Baghdad was entered on the 11th March. In the operations which led up to the **Capture of Baghdad** the Indian troops took a glorious part. After the fall of Baghdad there still remained work for the Expeditionary Force, in order to ensure the security of the occupied territory. Desultory operations continued throughout 1917, and in September the Turks were heavily defeated at Ramadieh up the Euphrates on the road to Aleppo. This together with General Allenby's operations in Palestine, put an end to any project of the Turks for the recovery of Baghdad. In November General Maude died of cholera and was succeeded by General Marshall, under whose command operations were carried out on the Mosul road which completed the destruction of Turkish power in Mesopotamia. Some activity continued in both Mesopotamia and Persia and during the period until the conclusion of the armistice and an unfortunate expedition was undertaken to Baku. But the power of the Turk on this front had been finally broken, and such forces as the enemy was able to assemble had to be employed in the attempt to keep back General Allenby's advance in Syria.

THE WAR IN EAST AFRICA.

Early in the war it was decided to undertake operations in East Africa where the local forces were rapidly reinforced by troops from India. The first Indian regiment to arrive was the 29th Punjabis, which reached British East Africa in September and were followed by Jind Infantry of the Imperial Service Troops. The Germans took the offensive and engagements soon took place in the Tsavo region. Here the combatants had to contend not only with the hostility of man but with the forces of nature in the form of wild beasts which after an engagement attacked the wounded and devoured the dead left on the field of action at night.

Towards the end of October an expeditionary force 6,000 strong, consisting of British, Indian, and Imperial Service troops, left Bombay under command of Major-General A. E. Aitken, to seize the German port of **Tanga**. The troops comprised the North Lancashire Regiment, the 101st Grenadiers and other Indian corps, and the Kashmir Rifles. These succeeded in forcing a way into the town, but the troops were of unequal quality, the Germans had warning of and were prepared for the attack, and the enterprise failed. The troops re-embarked and were transferred to British East Africa. In the meantime a force of locals, Indian troops and Imperial Service Troops under Major-General J. M. Stewart which attempted to capture Longido in the Kilimanjaro region were repulsed. An officer described the attempt.—“We marched all night, attacked at dawn, fought all day, and then, having failed to turn the Germans out, came back here as we had no water.” The first British attempts in East Africa certainly did not cover us with glory.

There was a further reverse at **Jassin** in January 1915. But in June a successful ope-

ration against Bukoba was undertaken under the direction of Major-General Tighe, who had assumed command in East Africa. In February 1916 General Smuts took over command from General Tighe, who had skillfully organised the defence and prepared for the succeeding operations. The German forces were then strongly entrenched in British territory S. E. of Kilimanjaro. In the ensuing operations the Germans were driven out during a most arduous campaign in which the 129th and 130th Baluchis, the 29th Punjabis, and other Indian troops took part. The names of the following corps also figure in the account of the operations—17th Cavalry, 5th and 17th Infantry, 40th Pathans, 61st Pioneers, and 101st Grenadiers. In these operations, characterised by hard work in a bad climate and by hard fighting General Smuts conquered the region from Kilimanjaro to Dar-es-Salaam, and by the time that General handed over command to Lieut. General A. R. Hoskins in January 1917, a great deal had been accomplished towards the final defeat of the enemy. General Hoskins was soon succeeded by General Van Deventer. By the end of 1916 the enemy was confined to the south-east and south central parts of the protectorate, and in November a campaign was begun in the Rutuji country, but there was still hard fighting and campaigning in an unhealthy country before the troops, which suffered from a very severe type of malaria. Operations continued throughout 1917, and in November the remnant of the Germans were driven out of German East Africa into Portuguese territory, where they continued to hold out until the end of the war. The Indian troops bore a conspicuous part throughout.

GALLIPOLI.

The Indian troops, being few in number, played a comparatively small but not distinguished part in the Dardanelles Campaign. The 29th Indian Brigade, consisting of the 14th Sikhs and 5th, 6th, and 10th Gurkhas, did not land at Cape Helles until the 1st May, some days after the first landing on the Peninsula. A Mountain Artillery Brigade also took part in the campaign, and Indian Transport did most notable and valuable service throughout. Soon after they landed the Turks made a determined attack on the troops in front of Krithia, and heavy fighting continued some days. By the middle of May the position had become stabilised and trench warfare had set in. But before this the 6th Gurkhas seized and consolidated a position on the summit of the cliff west of the Gully Ravine, afterwards known as Gurkha Bluff, and held until the end. In the fighting which took place during May the Indians suffered heavy losses, the 14th Sikhs in particular losing nearly all their British officers. On this front the Indian troops took part in the various attacks which were made during June and July in the attempt to capture Krithia.

Early in August the last attempt to dominate the passage of the Narrows was made. Fresh troop had been sent out from England

and some redistribution of the forces was made. The Anzac front was to be reinforced and from there a main attack was to be made in the hope of seizing the heights which commanded the waist of the Peninsula. This attack was to be aided by a subsidiary attack by fresh troops who were to be landed at Suvla, while at the same time a diversion to distract the enemy's attention was to be carried out on the Cape Helles front. The 29th Indian Brigade landed at Anzac to take part in the attack from that point. The battle began on the 6th August and the effort to carry the heights commanding the Narrows continued until the 10th. In these operations the Indian Brigade was employed in the assault on the Sari Bair heights under General Cox, and some Gurkhas succeeded in reaching the summit from whence could be seen the traffic rolling along the road to Constantinople and the gleaming water of the Dardanelles. But the Turkish counter-attack swept the assailants off the heights. The failure was no fault of the fighting men, nor can the blame be apportioned until the Proceedings of the Dardanelles Commission have been published in full.

At a later date the Indian troops were moved to Egypt.

Egypt and Palestine.—The possibility of a Turkish attack on Egypt was ridiculed in many quarters principally by ignorant people unacquainted with history which records many instances of armies crossing the Syrian desert, from ancient times to the expedition of Napoleon Bonaparte. The importance of Egypt in the world-system of communications of the British Empire rendered the adequate protection of that country necessary, and ensured an attempt on the part of the Turks to recover territory which formed a nominal portion of the Turkish Empire. It was obvious that troops for the defence of Egypt would be best supplied from the East, with which there was an almost safe line of communications. Indian troops were especially fitted for this important work owing to climatic reasons; and in earlier expeditions Indian troops had been often employed in Egypt. The Turks had hoped that the sympathies of the Muhammadan Indian troops would be with them, but in this, as might be expected, they were bitterly disappointed. They judged rather by the attitude of the "politically minded classes," and not by that of the Indian sepoys who have always shown such splendid loyalty to the Crown.

A considerable force was despatched from India, and was in a position for defending Egypt before the Turkish attack. It is not necessary to name in detail the Indian corps which took part in the campaigns in Egypt and Syria. Indeed the regiments which served in this theatre of war were from beginning to end so numerous that to detail them all would almost involve a recapitulation of the Army List. They represented every class and every arm of the service, including a considerable portion of the Imperial Service Troops.

It was not until February 1915 that the Turks, having advanced across the desert to the number of some 30,000 men, reached the bank of the **Suez Canal** in several columns and attempted to force a passage. They were opposed by considerable forces, including Sikhs, Punjabis, Rajputs, Gurkhas, and Pioneers, and were repulsed at Tussum-Serapeum, at Ismailia, El Kantara and other points. After repelling the enemy at Tussum the Indian troops counter-attacked with effect, as they did also at Serapeum. In these actions the Turks lost heavily. Only the absence of effective pursuit saved the retreating Turkish Army from destruction. The Indian troops had borne the brunt of the fighting and acquitted themselves well. The fighting which began on the 2nd was over on the 4th February. During 1915 minor operations took place on this front, but nothing of much importance occurred until the Turks were defeated at Roman Walls in August, and by February 1917 they were finally ejected from Egyptian territory.

Egypt and the Canal being now safe from invasion, operations for the conquest of Southern Palestine were undertaken by the Egyptian Expeditionary Force in 1917. Late in March an attack was made upon **Gaza**, and the second attempt in February, but these operations failed in their object. Sir Edmund Allenby then took over command and began those operations which terminated so brilliantly in October 1918. In April 1917 the Turkish

front from the Mediterranean near Gaza who strongly held to a point south and east of Bathsheba. Some Indian troops took part in the operations which began with the attack on Beersheba on the 31st October, and led to the capture of **Jerusalem** which was occupied on the 11th December 1917.

In the succeeding phases of the operations the Indian troops were largely augmented, for General Allenby had to send a large part of his force to Europe. The Jordan was crossed in March, but strong Turkish forces prevented the assumption of a vigorous offensive until some months later. In July the Turks made a determined attack on the British lines on the Jordan, and were repulsed with heavy loss; on the 18th September 1918, General Allenby began his new campaign, carrying the enemy's main position and driving him back in disorder and continuing the pursuit until he entered Damascus on the 1st October. In these operations some thirteen Indian Cavalry regiments and thirty-seven Indian battalions took part.

After this, **Beyrout** and **Tripoli** were successively occupied. **Aleppo** was entered on the 25th October, and the power of the Turk was completely broken. The operations which followed on the capture of Jerusalem resulted in the destruction of whole Turkish armies; but there is here no space for any description of these events, which added a new page to the glorious history of the Indian Army.

Additions to the Indian Army.—In 1918 large additions were made to the Indian Army, a great number of second battalions being raised to existing regiments. Men were enlisted from every part of India, classes being taken into the Army which had no military traditions whatever. Recruiting was proceeding when the armistice came to an end. The conclusion of the armistice and afterwards of peace did not bring the arduous work of the Indian Army to an end. They still garrisoned conquered territory, while a new war begun on the frontiers of Afghanistan gave prospect of prolonged campaigning.

Summary of India's Effort in the War.—In a despatch by the Commander-in-Chief published in July, 1919, the whole operations of the Indian Army during the war are reviewed. His Excellency gives in it the following figures showing the extent of India's contribution in terms of men. On the outbreak of war, the combatant strength of the Indian Army, including reservists, was 194,000 Indian ranks; enlistments during the war for all branches of the service amounted to 791,000, making a total combatant contribution of 985,000. Of this number 552,000 were sent overseas. As regards non-combatants, the pre-war strength was 45,000; an additional 427,000 were enrolled during the war; and 391,000 were sent overseas. The total contribution of Indian personnel has thus been 1,457,000 of whom 943,000 have served overseas. Casualties amounted to 106,594, which include 36,696 deaths from all causes. The number of animals sent overseas was 175,000.

Commission of Inquiry.—It was announced in July, 1919, that the Secretary of State for India, with the concurrence of the Secretary of

State for War, had appointed a committee to inquire into the administration and organisation of the Army in India. The composition of the committee is as follows:

President: Viscount Esher

Members: Sir M. O'Dwyer, I.C.S., late Lieut.-Governor of the Punjab; Sir G. Fell, I.C.S., late Financial Adviser, Military Finance Department, Government of India; Lieut.-General Sir H. V. Cox, Indian Army, Secretary, Military Department, India Office; Lieut.-General Sir C. W. Jacob, Indian Army, Commanding 2nd Army Corps, Army of the Rhine; Lieut.-General Sir H. Hudson, Indian Army, Adjutant-General in India; Lieut.-General Sir J. P. Du Cane (late R.A.), late Commanding XV Corps, B.E.F.; Major-General Sir W. Gillman (late R.A.), recently Chief of the General Staff in Mesopotamia.

Secretary: Brigadier-General C. M. Wagstaff, R.E.

The terms of reference are :—

1. To inquire into and report, with special reference to post-bellum conditions, upon the administration and, where necessary, the organisation of the Army in India, including its relations with the War Office and the India Office, and the relations of the two offices with one another.

2. To consider the position of the Commander-in-Chief in his dual capacity as head of the Army and member of the Executive Council, and to make recommendations.

2. To consider and report upon any other matters which they may decide are relevant to the inquiry.

The committee will meet first in London, where two months' work is anticipated; later the committee will proceed to India to examine witnesses and conditions on the spot.

Reserves.

The Indian Army Reserve dates from 1886. Under existing arrangements, it consists of men with not less than three years' colour service. Men passing into the Reserve still belong to their respective regiments, and come up for two months' training once in two years. In 1904 when the strength of the Reserve was about 24,500 men, it was decided to raise it gradually to 50,000 men, reducing the reserve pay from Rs. 3 to Rs. 2 a month, and also to form an Indian cavalry reserve by extending the system to Silladar cavalry regiments. Reservists obtain a pension after 25 years' total service.

Reserve of Officers.—For some years there has been entertained what was called The Indian Army Reserve of Officers—a small body of trained officers who would be available to replace the casualties amongst the British officers serving with the Indian troops in time of war. This branch of the service was however grievously neglected; the conditions of service were unattractive, the prospects of promotion

were practically nil; and the military authorities preferred to rely on the expedient of multiplying the number of British officers serving with Indian troops in order to meet casualties, rather than to train up an effective reserve. This policy tested by the war was found wanting. The casualties amongst the British officers with the Indian regiments were very large indeed; these regiments lost their initiative when deprived of the officers on whom they had been taught to rely, and it was impossible to make the great gaps good from the ordinary officer class, because of their lack of knowledge of the Indian languages and Indian conditions. An appeal for recruits for the Indian Army Reserve of Officers met with a very ready response. The first enrolments reached the substantial figure of fourteen hundred, a very large proportion of whom were drawn from the Volunteer Officers, or from the ranks of special corps like the Light Horse, who are ordinarily recruited from the officer class. The officers selected were put through a rapid course with British and Indian regiments; made to pass a language test, and when efficient were sent to serve with the Indian regiments at the front. They have done excellent service and have suffered many casualties; indeed, without this reinforcement of officers specially acquainted with Indian conditions, the efficiency of this Indian Regiments could not have been maintained. The numbers were raised to over 4,000.

The Imperial Service Troops.

The voluntary movement towards co-operation in the task of Imperial defence that led to the formation of the force of Imperial Service Troops was initiated in 1887 by an offer made by the Nizam of Hyderabad, whose example was at once followed by a number of the leading Native Princes. The troops, which are under regular inspection by British Officers, though available for Imperial service when placed at the disposal of the British Government by their Rulers, belong to the States and are recruited from their subjects. Their armament is the same as that of the Native Army, and in training, discipline, and efficiency they have reached a high standard of excellence. They have done good service on the North-West Frontier and also in China and Somaliland. At the beginning of the decade (1901-02 to 1911-12) twenty-three States between them supplied a total of over 16,000 men. Some additional offers of contingents have since been accepted, and the total strength is approximately 22,271, towards which twenty-nine States contributed. The total included some 10,000 infantry, and 7,500 cavalry, while transport and camel corps contributed 2,700 and 700 men respectively. Sappers also numbered about 700. Gwalior contributes nearly 4,000 men, and Kashmir over 3,500; Patiala, Hyderabad and Alwar contribute over 1,000 each. On the outbreak of the war practically the whole body of Imperial service Troops was immediately placed at the unfettered service of the King-Emperor. Many of these offers were gratefully accepted and large bodies of Imperial Service Troops proceeded to one or other of the theatres of the war.

The Imperial Cadet Corps.

The Imperial Cadet Corps was founded in 1901, with the object of providing military training for the scions of ruling and noble families. The Corps consists of about 20 young

men of noble birth who have been educated at the Chiefs' Colleges. The course of instruction lasts between two and three years, and the cadets are taught military exercises and military science. Its headquarters are at Dehra Dun.

THE INDIAN DEFENCE FORCE.

For some time before the war began it was realised that the Volunteer system in India was unsatisfactory, and the war made that realisation all the more acute. Chambers of Commerce and other bodies passed resolutions in favour of some form of compulsory service for able-bodied Europeans, but none of the schemes suggested, either for the improvement of the Volunteers or for the creation of a new body, was very definite, nor indeed could it be, owing to the absence of any definite pronouncement by the Government of India as to the function which the Volunteers were supposed to perform in war and peace. It is true that from the outbreak of the war the Volunteers were freely used, especially in Bombay, for a variety of duties normally performed by garrison troops, such as embarkation work and later on for escorting prisoners to Ahmednagar. Volunteers joined the Army and the Indian Reserve of Officers in large numbers, a Volunteer Battery went to Mesopotamia and a Volunteer Maxim gun section went to East Africa; but of the force as a whole no use was made and no compulsory use could be made so long as Section 16 of the Indian Volunteers' Act, which prescribed local limits of service, remained in force.

By the beginning of 1916, however, the gradual withdrawal from India of European troops made it necessary to endeavour to form some scheme by which the Europeans remaining in the country could be employed for its defence. How many Europeans in India were fit to bear arms was not known, nor did the most recent Census figures afford any clue as large numbers had left since August, 1914, and their places were not being filled from England. The first step therefore towards the desired end was the registration of Europeans, and on February 2nd, the **Registration Ordinance, 1917**, was published. By that Ordinance every male European British subject (as defined in the Criminal Procedure Code, 1898) between the ages of 16 and 50 was compelled to register his name; place of residence; date of birth; whether single, married or widower; number of dependents, if any; profession or occupation, if any; name of business; address of employer, if any; and nature of employer's business; whether the work on which he was employed, if any, was work for or under any Government department; whether he had undergone military or naval training of any description, if so what and for what period.

European British Subject.—According to section 4 (1) of the Code of Criminal Procedure, European British subject means:—(1) Any subject of His Majesty, born, naturalised or domiciled in the United Kingdom of Great Britain and Ireland or in any of the European, American or Australian Colonies or possessions of His Majesty or in the Colony of New Zealand

or in the Colony of the Cape of Good Hope or Natal, (2) any child or grandchild of any such person by legitimate descent. That definition, as will be seen later, was amended before the passing of the Indian Defence Force Act.

Exception.—Persons in the following categories were non-liable to register but might be called upon to support their claims to such non-liability:—persons not ordinarily resident in British India; members of His Majesty's naval and military forces other than volunteers enrolled under the Indian Volunteers Act, 1869; persons in Holy Orders or regular ministers of any British denomination; persons who have at any times since the beginning of the war been prisoners of war, captured or interned by the enemy or have been released or exchanged.

Failure to comply with the Ordinance is punishable with a fine which may extend to Rs. 500, and failure to notify change of address within seven days is punishable with fine which may extend to Rs. 200.

Registration authorities.—It was provided by a schedule to the Ordinance that these authorities should be in the case of any person in Government employ the head of the department; in the case of any person in the employ of any public authority the chief executive officer of such authority; in the case of any person in the employ of any railway the head of the railway administration; in any other case where no special authority is prescribed the District Magistrate of the district where the person for the time being is resident, or, in the case of a person resident in a presidency town, the Commissioner of Police.

The Bill introduced.—The process of registration was carried out with little difficulty and but few cases of prosecution for failure to register were reported in the Press. Shortly afterwards the Indian Defence Force Bill was introduced (for the full text of the Act, see at the end of this article) and on that occasion **H. E. the Viceroy** explained that volunteering was a broken reed and that there must be equality of sacrifice. "It is useless," he said, "to spend money on a military force which is bound to be ineffective under the condition and the nature of its existence, so this new force will come under the provisions of the Indian Army Act. It is intended to be an effective military organisation as the British element under this Act is to be dealt with on the same lines as those of the British regulars, so the Indian element will come under the same military conditions which apply to the Indian regular forces, saving the fact in both cases that service is to be within India. I do not think it necessary for me to labour this point. We cannot play at soldiers in these times, nor I hope shall we play at soldiers at any future time."

In introducing the Bill **H. E. the Commander-in-Chief** stated that the service companies would for all intents and purposes be regular units for the time being, and would be clothed, equipped, rationed, and paid as regulars. They would relieve regular units on garrison duty and would be stationed anywhere in India where they might be required. He hoped that their work would be reckoned officially as war service.

In conclusion he said that "though the Indian Defence Force will be a second line force it will be in no sense a second rate force. For, we mean to make it a model of its kind. Its members must realise that we are dealing now with serious soldiering and that personal convenience and other considerations must yield to military efficiency, and to the creation of a spirit of discipline upon which that efficiency so largely depends. The old volunteer force has become an anachronism, it has been replaced at Home by the Territorial Force, and will now be replaced in India by a Defence Force designed to suit local requirements whose development and progress will be watched with the keenest interest."

European British Subjects.—The main alteration in the Bill suggested by the Select Committee to which it was referred related to the definition of the term "European British Subjects." It was proposed originally to define that phrase as in the code of Criminal Procedure, but the Committee made it more comprehensive. It retained the referential definition contained in the Bill and brought within the scope of the definition two other classes of persons, namely, persons who within the prescribed period have asserted the status of a European British Subject by lodging form (a) with the Registration authority under the Registration Ordinance, 1917, and persons who are members of a Volunteer corps constituted under the Indian Volunteers Act, 1869. "In the first case," said the Committee in their report, "the person concerned has himself put forward a claim to the status which should not lightly be refused, and in the second case the justification for such a course is that a person who has undergone some form of military training at the expense of the state may well be required to aid that state in the time of need. By this amendment we consider that a considerable extension will be given to the ambit of the definition, and though the change might not commend itself if we were undertaking normal legislation in normal times, we think that at the present juncture it is justifiable." The effect of this change was to include in the Force a number of Goanese and other aliens who had previously been members of the Volunteer Force many of whom were subsequently exempted by the Tribunals from liability to General Service.

Exemption Tribunals.—Hasty drafting of the Bill led to not a little confusion and particularly was this noticeable in the proceedings of the Exemption Tribunals. The grounds on which they could grant exemption were sufficiently clear but what was or was not in the "national interest" was a frequent source of discussion. Nor were the duties of the Selection Committees (which select the men

required at a given time for General Service) at first clearly laid down, and it was not until the Tribunals realised that a Selection Committee had power to refuse to select as well as power to select a given man that anything like uniformity of procedure became noticeable among the various Tribunals. But by that time some of the more lenient Tribunals, that in Calcutta more particularly, had either totally or partially exempted numbers of men who would have had little chance of obtaining any form of exemption from those Tribunals which more fully realised the gravity of the circumstances which had made the passing of the Indian Defence Force Act necessary.

The response of **Indians** to the invitation to enrol themselves in the Defence Force was from the first poor. Objection was taken to the terms offered and to the distinction made between Europeans who were compelled to serve and Indians who were only asked to gratify their frequently expressed longing to join the Volunteer force. In May the Government of India issued a resolution on the subject in which they noted with concern the disappointing response made to their appeal and recapitulated the circumstances in which the scheme was initiated. It is, said the Resolution, "a matter of disappointment to the Government of India to find that during the first two months after the passing of the Act only 300 men have been enrolled in place of the 6,000 for which preparations were made. It is felt that all who take an interest in the Defence Force and believe those sentiments of patriotism which have brought it into being, and who have the good name of India at heart will be disheartened to learn that out of the six months for which recruiting is open so much time should have elapsed without any adequate response being made." At the end of August, instead of 6,000 being enrolled as a preliminary step in six battalions, only 3,803 had applied to be enrolled. In September, when the Hon. Mr. Sarma moved in Council that the period of applications for enrolment should be extended, the Commander-in-Chief said the final figures were 5,634 which, allowing for rejections, were as many recruits as could well be drilled. After some months the question of increasing the force might be reconsidered.

Conditions of Service.—The conditions under which Indians were invited to serve were those applying to His Majesty's Indian Forces in the Regular Army, and, as periodical training was not demanded of those enrolled, were far less onerous than the terms imposed on Europeans in India. A further concession to Indian wishes was made in 1918 when it was announced that Indians might offer themselves for enlistment in any of six territorial L. D. F. units up to the total number of 6,200, after which Government would be prepared to consider a gradual augmentation of the establishment up to a maximum of 12,000. A Press-Note explained that "the Indian portion of the Indian Defence Force is to be of real value in the present emergency, it is very desirable that the six units above-named should be raised to the full establishment as soon as possible in order that immediate progress may be made with their training."

Act No. III of 1917.

[28th February 1917.]

An Act to constitute an Indian Defence Force and for other purposes.

Whereas it is necessary to constitute an Indian Defence Force, and compulsorily to enter for service in that Force certain European British subjects; and

Whereas in the case of others, it is deemed sufficient for the present to take power to enrol for such service only such persons as may offer themselves for enrolment; it is hereby enacted as follows:—

1. (1) This Act may be called the Indian Short title, extent Defence Force Act, 1917, and duration.

(2) It extends to the whole of British India, including British Baluchistan and the Sonthal Parganas, and applies also to European British subjects within the territory of any Native Prince or Chief in India.

(3) It shall remain in force during the continuance of the present war, and for a period of six months thereafter.

2. In this act, unless there is anything repugnant in the subject or context—

“European British subject,” means a European British subject as defined in the Code of Criminal Procedure, 1898, and shall, for the purposes of this Act, be deemed to include every person who, before the third day of March, 1917, has filled up, signed and lodged Form A with the Registration Authority under the Registration Ordinance, 1917, and also every person who at the commencement of this Act is a member of a corps of volunteers constituted under the Indian Volunteers Act, 1869;

“Prescribed” means prescribed by rules made under this Act.

3. Every male European British subject who, on the first day of February 1917, was ordinarily resident in India or thereafter becomes so resident, and who for the time being has attained the age of eighteen years and has not attained the age of forty-one years and who is not within the exceptions set out in the Schedule to this Act, shall be deemed to be enrolled for general military service within the meaning of this Act:

Provided that, if any person referred to in this section whilst engaged in actual military employment of which fact the Commander-in-Chief in India shall be the sole judge, attains the age of forty-one years, such person shall continue to serve for such additional period not exceeding one year as the prescribed military authority may direct.

4. Every male European British subject who, on the first day of February, 1917, was ordinarily resident in India, or thereafter becomes so resident, and who for the time being has attained the age of forty-one years

but has not attained the age of fifty years, and who is not within the exceptions set out in the Schedule to this Act, shall be deemed to be enrolled for local military service within the meaning of this Act.

5. Every male European British subject who, on the first day of February, 1917, was ordinarily resident in India, or thereafter becomes so resident, and for the time being has attained the age of sixteen years, but has not attained the age of eighteen years, shall be deemed to be enrolled for local military service, but shall only be liable to such military training as may be provided for by regulations made under this Act, and shall not be liable to any other form of military service.

6. Every person deemed to be enrolled for military service, whether local or general, shall, as from the commencement of this Act, be deemed to be enrolled in the Indian Defence Force, and may be appointed to such corps or unit thereof as he may thereafter be assigned to, and shall, if he is a person deemed to be enrolled for general military service, be liable to serve in any part of India.

7. Every person deemed to be enrolled for local military service shall be subject to any rules and regulations relating to that service which may be made under this Act:

Provided that no such rule or regulation shall require any such person to serve outside the limits of the prescribed local area.

8. (1) Every person deemed to be enrolled for general military service shall be subject to any rules and regulations relating to that service which may be made under this Act.

(2) Every such person, when called out in the prescribed manner for general military service shall be subject to the provisions of the Army Act and any orders or regulations made thereunder, whereupon the said Act orders and regulations shall apply to him as if the same were enacted in this Act, and as if such person held the same rank in the Army as he holds for the time being in the Indian Defence Force.

9. If any question arises, with reference to this Act, whether any person is a European British subject within the meaning of this Act or is “ordinarily resident” in British India, or is within the exceptions set out in the Schedule or as to the age of any person, the prescribed authority, or a person authorized in this behalf in writing by that authority, shall apply to the District Magistrate or to an officer specially empowered in this behalf by the Local Government, in the district or local area in which the person to whom the dispute relates is for the time being, and such Magistrate or other officer after

hearing such person or giving him a reasonable opportunity of being heard, shall summarily determine the question, and the decision of such Magistrate or other officer shall be final for all the purposes of this Act :

Provided that if any question referred to in this section has been decided in accordance with the procedure provided in the Registration Ordinance, 1917, such decision shall be deemed to be a decision under this section of this Act.

10. If any person who is deemed to be enrolled for military service, whether local or general, under obligation disobeys any notice or order for military service, any District or Chief Presidency Magistrate may, on the application of the prescribed authority, or of a person authorized in this behalf in writing by that authority, cause such person to be arrested and brought before him, and if the Magistrate is satisfied that he is a person to whom Sections 3, 4 or 5 of this Act applies, and who has been called out for such service, the Magistrate without prejudice to any penalty which such person may have incurred shall make over such person to the custody of the military authorities.

11. (1) Application may be made to the prescribed authority by, or Certificate of (subject to rules made under this Act) in respect of, any exemption. person referred to in Sections 3, 4 or 5, for the issue to him of a certificate of exemption under the provisions of this Act on any of the following grounds, namely :—

(a) that it is expedient in the national interest that he should instead of being employed in military service be engaged in other work ; or

(b) if he is being educated or trained for any work that it is expedient in the national interest that he should continue to be so educated or trained ; or

(c) ill-health or infirmity ; and the prescribed authority, if it considers the grounds of the application established, shall grant such a certificate.

(2) The Governor-General in Council may also, by order in writing direct the issue to such persons or class of persons, as he thinks fit, of certificates of exemption if he is satisfied that such a course is desirable in the national interest.

(3) Any certificate of exemption may be absolute, conditional, or temporary, and may be renewed, varied or withdrawn at any time by the authority which granted it, and may provide that a person liable to general military service shall perform local military service :

Provided that every conditional or temporary certificate shall state the conditions under which or the period for which it is granted.

(4) If, for the purpose of obtaining exemption for himself or any other person, or for the purpose of obtaining the renewal, variation, or withdrawal of a certificate, any person makes a false statement or false representation, to any authority under this section, he shall be punishable with imprisonment for a term which may extend to six months, or with fine or with both.

12. (1) The Governor-General in Council may, by notification in the "Gazette of India," constitute, in any local area which he may specify in the notification, corps or units for the enrolment in the Indian Defence Force of persons other than European British subjects, who satisfy the prescribed conditions and, within six months from the commencement of this Act, offer themselves for enrolment for general military service, and such persons may be enrolled accordingly in the prescribed manner.

(2) Every person enrolled in a corps or unit constituted under Sub-Section (1) shall be liable to serve in any part of India, shall be subject to all rules and regulations that may be made under this Act relating to his corps or unit, and shall not quit such corps or unit, except in the prescribed manner.

(3) Every such person shall, when called out in the prescribed manner for general military service, be subject to the Indian Army Act, 1911, and the rules made thereunder, whereupon the said Act and rules shall apply to him as if he held the same rank in the Indian Army as he holds for the time being in the Indian Defence Force.

13. (1) The Governor-General in Council may make rules to carry out the purposes of this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such rules may—

(a) prescribe authorities for the purposes of Sections 9 and 10 ;

(b) constitute authorities and prescribe the procedure of such authorities for the purpose of considering applications for exemption from military service ;

(c) prescribe the time within which, and the form in which, such application may be made, and the persons other than the person to be exempted by whom it may be made ;

(d) prescribe the conditions subject to which persons other than European British subjects should be permitted to offer themselves for general military service ;

(e) prescribe the military or other obligations to which persons or any class of persons enrolled or deemed to be enrolled under this Act shall respectively be liable ; constitute or specify Courts for the trial and punishment of breaches of such obligations ; prescribe the procedure to be followed by such Courts ; and provide for the enforcement or carrying out of the orders or sentences of such Courts ;

(f) provide for the medical examination of persons liable to general military service ;

(g) provide for the calling out and all purposes ancillary thereto of persons or any class of persons liable to general military service, and constitute authorities for the purpose of assisting in the selection of persons to be so called out ; and

(h) provide for any matter in this Act directed to be prescribed.

(3) Rules made under this section may provide that any contravention thereof or of any order or notice issued under the authority of any such rules shall be punishable with imprisonment for a term which may extend to six months, or with fine or with both.

(4) All rules made under this Act shall be published in the "Gazette of India", and on such publication shall have effect as if enacted in this Act.

14. (1) The Commander-in-Chief in India may, subject to the control of the Governor-General in Council, specify the summary and minor punishments for breach of any rule made under this Act to which persons enrolled or deemed to be enrolled under this Act shall be liable, without the intervention of a Court, and the officer or officers by whom and the extent to which such summary and minor punishments may be awarded.

(2) No punishment exceeding in severity imprisonment in military custody for a period of seven days shall be imposed as a summary punishment, and no punishment involving any kind of imprisonment shall be imposed as a minor punishment.

15. (1) The Commander-in-Chief in India may make regulations providing generally for all details connected with the organization, personnel, duties, and military training of any persons liable to military service or training under this Act.

(2) In particular and without prejudice to the generality of the foregoing power, such regulations may—

(a) specify the units, whether of regular troops or any other military force with which any person or class of persons enrolled or deemed to be enrolled under this Act shall serve or undergo military training, or constitute special military units for that purpose;

(b) specify the courses of training or instruction to be followed by any person or class of persons liable to military service or training under this Act; and

(c) provide for and regulate the remuneration, allowances, gratuities or compensation (if any) to be paid to any person or class of persons

undergoing military service or training under this Act or to their dependants.

(3) Regulations made under this section may provide that any contravention thereof, or of any order or notice issued under the authority of any such regulation, shall be punishable with fine which may extend to five hundred rupees.

16. Nothing in this Act shall apply to any Act not to apply to persons confined in a prison or lunatic asylum.

17. The Governor-General in Council may disband any corps or unit constituted under this Act.

18. The provisions of the Registration Provisions of Ordinance, 1917, shall be in force during the continuance of this Act, and shall have effect as if they had been enacted in this Act:

Provided that the following amendments shall be made therein, namely:—

(1) In Section 3, Sub-Section (1), of the said Ordinance, for the words "had not attained the age of fifty years on the first day of February, 1917," the words "who for the time being has not attained the age of fifty years," shall be substituted.

(2) In Schedule II of the said Ordinance in entry (1) after the word "forces" the words "or of the Royal Indian Marine Service" shall be inserted, and in entry (2) for the word "British," the word "religious" shall be substituted.

THE SCHEDULE.

(SEE SECTIONS 3 AND 4.)

Exceptions.

(1) Members of His Majesty's naval and military forces of the Royal Indian Marine Service other than Volunteers enrolled under the Indian Volunteers' Act, 1869.

(2) Persons in Holy Orders or regular Ministers of any religious denomination.

(3) Persons who have at any time since the beginning of the war been prisoners of war, captured or interned by the enemy, or have been released or exchanged.

AMENDING BILLS.

During the autumn, 1918, session of the Imperial Legislative Council three Bills were officially introduced which contained amendments to the I. D. F. Act. The first made it possible for men over 50 to volunteer for service in the Defence Force. Some such provision had been contemplated in 1917 but it was not then thought worthwhile to legislate

for the small number of men likely to be affected. Experience, however, showed that there was a good proportion of men in the Force who on attaining the age of 50 might wish to remain in it. **Territorial Limitations.** The second Bill known as the Indian Defence Bill brought men under 41 more on equality with their fellow citizens in the United Kingdom who are

liable to service in any part of the world. It enlarged the scope of the military service imposed by the I. D. F. Act so as to make service out of India compulsory in the case of European British subjects in the General Service class (i. e., between the ages of 18 and 41). This measure, said the Commander-in-Chief when introducing it, has the "advantage of considerably increasing the utility of the Indian Defence Force, for it is evident that military operations based on India might easily extend beyond its frontiers, and in such circumstances, the existing territorial limitations in regard to the employment of the force would prove highly inconvenient."

Industrial Compulsion Act.

Of greater importance, however than the two Bills just mentioned, was the Bill which sought to provide that persons deemed to be enrolled for military service under the I. D. F. Act might be called upon to perform war work. The bill was introduced and, after considerable criticism by two European members, postponed for six months. It is sufficiently explained in the statement of objects and reasons which states: Certain industries of national importance, which are essential to the maintenance of the forces in the field, are steadily expanding on a large scale necessitating the employment of men with special technical knowledge and training on a scale commensurate with such expansion. It is becoming increas-

ingly difficult to obtain the services of specialist from the United Kingdom and it is proposed to utilise to the fullest extent the services of those who are in India. The Bill is designed to give effect to this proposal. Briefly the Bill provides for taking power, by an order in writing to require any member of the European portion of the Indian Defence Force, whether in possession of an exemption certificate or not, to take up or continue any employment in any industry declared to be of national importance by the Governor-General in Council. Persons in respect of whom such an order has been made will be deemed to have been called out for general military service or to have been called upon to perform actual military duty as the case may be, according as they belong to the general military service or local military service class. It is not intended to exercise this power except for the purposes of Government service and industrial concerns under Government control. It is proposed to make provision for the payment of reasonable salaries to persons employed on technical work and to utilise the services of the selection committees formed under the Indian Defence Force Act for advising the Government as regards individual cases. This Act, owing to the conclusion of the war, was never enforced. The training of the Indian Defence Force was modified in 1919 and it is expected that a new scheme of service will replace that force early in 1920.

STRENGTH AND HEALTH OF THE ARMY.

The average strength of **European Troops**, Regulars and Territorials, in India during 1917 was 80,825 as compared with 60,737 in 1916. The following table shows the main facts as regards the health:—

Period.	Average strength.	Admissions.	Deaths.	Invalids sent home.	Average constantly sick.
1910-14 (Averages) ..	69,440	39,389	303	488	2094.57
1915	44,891	36,952	267	889	1754.19
1916	60,737	46,892	397	1,343	2414.56
1917	80,825	62,372	390	1,337	3686.45

The average strength of **Indian Troops** including those on duty in China and other stations outside India, but excluding those under field service conditions, was 191,242 in 1917 as compared with 139,076 in 1916. The following table gives the actuals of sickness, mortality and invaliding for each of the years 1917, 1916, 1915 and the averages for the quinquennial period 1910-14.

Period.	Average strength.	Admissions.	Deaths.	Invalids.	Average constantly sick.
1910-14 (average)	130,261	71,213	573	699	2,662
1915	119,985	89,315	1,026	5,415	4,065
1916	39,076	105,333	1,248	3,745	6,250
1917	191,242	141,787	2,201	3,421	6,556

Expenditure on the Military Services.

	Accounts, 1916-17.	Accounts, 1917-18.	1918-19.		1919-20, Budget.
			Budget.	Revised.	
EXPENDITURE.	Rs.	Rs.	Rs.	Rs.	Rs.
INDIA—					
<i>Effective Services—</i>					
Administration ..	57,48,817	67,29,355	66,28,800	69,92,000	70,69,020
Military Accounts ..	26,20,842	28,31,257	27,88,050	28,06,000	28,29,400
Regimental Pay, etc.	7,72,27,057	8,00,99,534	8,29,91,860	8,19,19,000	13,80,70,750
Supply and Transport	2,91,17,776	3,50,30,972	3,48,04,080	4,10,19,000	5,12,71,000
Veterinary	1,72,784	1,98,304	1,70,240	2,00,000	1,94,960
Clothing	42,37,239	26,77,025	20,42,000	39,36,000	72,75,200
Remounts	44,62,466	55,35,529	43,83,680	46,48,000	50,32,760
Medical Services ..	30,12,527	32,32,100	31,66,310	36,27,000	69,05,460
Medical St	6,19,833	22,32,843	13,40,630	23,01,000	23,38,000
Ordnance	1,18,71,030	1,59,59,793	1,79,92,030	2,23,00,000	1,82,19,980
Ecclesiastical ..	3,96,759	4,36,924	4,03,700	4,36,000	4,40,180
Education	5,65,931	6,74,813	7,03,280	8,42,000	14,10,290
Compensation for Food, etc.	34,00,920	7,99,000	7,47,000	12,66,000	28,69,000
Miscellaneous Services	11,31,78,446	14,08,82,246	15,96,43,000	33,28,56,000	21,47,96,000
Indian Munitions Board.	55,019	28,55,621	21,86,230	34,66,000	30,56,470
Hutting	2,56,912	2,65,487	2,00,000	3,20,000	2,50,000
Conveyance by Road, River and Sea.	9,65,231	8,13,580	8,33,970	9,97,000	9,88,690
Conveyance by Rail..	1,09,80,704	1,48,21,052	1,20,00,000	2,36,50,000	2,14,00,000
Cantonments ..	17,37,917	18,41,728	12,08,090	18,75,000	13,16,840
Unadjusted Expend- iture.	—1,75,481	—16,27,238	....	....	....
TOTAL Rs. ..	27,04,52,729	31,62,89,725	33,41,83,000	53,54,56,000	48,57,32,000
<i>Non-effective Services—Rs.</i>	1,28,45,207	1,46,21,875	1,60,71,000	1,59,90,000	1,78,71,000
TOTAL INDIA Rs. ..	28,32,97,936	33,09,11,600	35,02,54,000	55,14,46,000	50,36,03,000
Equivalent in sterling £ ..	18,886,529	22,060,774	23,350,300	36,763,100	33,573,500

	Accounts, 1916-17.	Accounts, 1917-18.	1918-19.		1919-20, Budget.
			Budget.	Revised.	
ENGLAND—	£	£	£	£	£
<i>Effective Services—</i>					
Payments to War Office for British Forces.	930,700	930,700	930,700	872,200	911,700
Furlough Allowances, etc., of British Forces.	14,941	15,219	30,000	20,000	50,000
Consolidated Clothing Allowances of British Soldiers.	1	....	....	....	....
Furlough Allowances, Indian Service.	190,062	191,037	187,000	192,000	250,000
Indian Troop Service.	277,010	303,818	272,300	272,300	310,000
Other Heads	31,677	33,993	40,500	166,800	63,100
Clothing Stores ..	108,039	110,000	110,000	110,000	110,000
Ordnance and Miscellaneous Stores.	1,152,872	1,946,096	166,700	422,000	429,400
Medical Stores ..	182,705	117,303	161,700	140,000	183,000
Remount Stores ..	....	2,945	3,200	3,200	3,200
Supply and Transport Stores.	83,000	83,000	83,000	83,000	83,000
Mechanical Transport Stores.	1,65,439	150,272	160,000	125,000	160,000
Military Farms Stores	25,428	23,879	31,100	37,400	39,700
Aviation Stores ..	....	63	203,300	100,000	200,000
North-West Frontier, 1914.	29,638	....	....	....	....
Stores taken to India with Troops.	....	....	....	1,600	....
TOTAL £ ..	3,191,512	3,908,325	2,379,500	2,545,500	2,793,100
<i>Non-effective Services—</i>					
Payments to War Office for British Forces.	676,073	672,373	576,100	1,076,400	1,941,100
Pensions, Indian Service.	1,236,154	1,175,236	1,170,000	1,150,000	1,130,000
Other Heads	269,735	277,196	315,000	285,000	292,000
TOTAL £ ..	2,181,962	2,124,805	2,061,100	2,511,400	3,363,100
TOTAL ENGLAND £ ..	5,373,474	6,033,130	4,440,600	5,056,900	6,156,200
TOTAL EXPENDITURE £ ..	24,260,003	28,093,904	27,790,900	41,820,000	39,729,700
RECEIPTS.					
	Rs.	Rs.	Rs.	Rs.	Rs.
India Rs.	1,17,70,562	1,53,52,150	1,29,01,000	1,56,15,000	1,39,47,000
Equivalent in sterling £	£	£	£	£	£
England £	784,704	1,023,477	860,100	1,041,000	929,800
	330,814	280,453	284,000	269,200	274,500
TOTAL RECEIPTS £ ..	1,115,518	1,303,930	1,144,100	1,310,200	1,204,300
TOTAL NET EXPENDITURE, £	23,144,485	26,789,974	26,646,800	40,509,800	38,525,400

THE EAST INDIES SQUADRON.

Since 1903 a squadron of the Royal Navy, known as the East Indies Squadron, has been maintained in Indian waters. It has naturally varied in strength from time to time, and of late years in particular there have been several changes in its composition, the most recent being in the direction of strengthening it, owing to the disappearance of strength in the other squadrons of the Eastern Fleet. In 1903 the squadron consisted of one second class and three smaller cruisers and four sloops or gunboats. In 1906, when the policy of withdrawal from Eastern waters was inaugur-

ated, it consisted of two second class and two third class cruisers, and remained at this strength until 1910: when one second class cruiser was withdrawn and two smaller vessels substituted, and three cruisers were lent from the Mediterranean to assist in the suppression of the arms traffic in the Gulf. By 1913 the position of the East Indies squadron had considerably improved. The battleship *Swiftsure* had taken the place of the second class cruiser which had been flagship, and a modern second class cruiser replaced the *Perseus*.

The proportion of contributions from the overseas Dominions towards naval expenditure is shown in the following table issued with the last Navy Estimates that gave details:—

Received from	Nature of Service.	Total.
		£
India	Maintenance of His Majesty's Ships in Indian Waters..	100,000
	Indian Troop Service (on account of work performed by the Admiralty)	3,400
	Repayment on account of services rendered by His Majesty's Ships engaged in the suppression of the Arms Traffic in the Persian Gulf	64,000
Australian Commonwealth Dominion of Canada.	Contributions on account of liability for Retired Pay of Officers and Pensions of Men lent from the Royal Navy.	10,800
Australian Commonwealth Do.	Survey of the N. W. Coast of Australia	7,500
	Maintenance of an Australasian Squadron and of a branch of the Royal Navy Reserve	41,600
Dominion of New Zealand.	Maintenance of an Australasian Squadron and of the Imperial Navy generally, also of a branch of the Royal Naval Reserve	100,000
Union of South Africa	General maintenance of the Navy	85,000
Newfoundland	Maintenance of a branch of the Royal Naval Reserve ..	3,000
	Total ..	415,300

India's Marine Expenditure.

Since 1869 India has paid a contribution of varying amounts to the Imperial Government in consideration of services performed by the Royal Navy. Under existing arrangements, which date from 1896-7, the subsidy of £100,000 a year, is paid for the upkeep of certain ships of the East India Squadron, which may not be employed beyond prescribed limits, except with the consent of the Government of India. The chief heads of marine expenditure, which amounts to nearly £400,000 annually, are shown below. Charges and receipts in respect of pilotage are no longer brought to account under this head:—

		Accounts, 1916-17.	Accounts, 1917-18.	1918-19.		1919-20.
				Budget.	Revised.	Budget.
EXPENDITURE.						
India	Rs.	40,85,438	67,45,164	52,53,000	61,62,000	62,40,000
Equivalent in sterling	£	272,362	449,678	350,200	410,800	416,000
England	£	421,318	358,146	610,100	598,800	815,600
Total	£	693,680	807,824	960,300	1,009,600	1,231,600
RECEIPTS.						
India	Rs.	54,75,072	48,32,333	46,29,000	47,01,000	44,85,000
Equivalent in sterling	£	365,005	322,155	308,600	313,400	299,000
England	£	22	....	....	....	....
Total	£	365,027	322,155	308,600	313,400	299,000
NET EXPENDITURE	£	328,653	485,669	651,700	696,200	932,600

ROYAL INDIAN MARINE.

The Royal Indian Marine (The Sea Service under the Government of India) traces its origin so far back as 1612 when the East India Company stationed at Surat found that it was necessary to provide themselves with armed vessels to protect their commerce and settlements from the Dutch or Portuguese and from the pirates which infested the Indian coasts. The first two ships, the *Dragon* and *Hosander* (or *Osiander*), were despatched from England in 1612 under a Captain Best, and since those days under slightly varying titles and of various strengths the Government in India have always maintained a sea service.

The periods and titles have been as follows:—

Hon. E. I. Co.'s Marine	..	1612—1686
Bombay	..	1686—1830
Indian Navy	..	1830—1863
Bombay Marine	..	1863—1877
H. M. Indian Marine	..	1877—1892
Royal Indian Marine	..	1892, Present day.

The Marine has always been most closely connected with Bombay, and in 1668 when the E. India Co. took over Bombay, Captain Young of the Marine was appointed Deputy Governor. From then until 1877 the Marine was under the Government of Bombay, and although from that date all the Marine Establishments were amalgamated into an Imperial Marine under the Government of India, Bombay has continued to be the headquarters and the official residence of the Director.

War Service of the Marine.

1612-1717 Continuous wars against Dutch, Portuguese and Pirates for supremacy of West Coast of India. 1744 War with France, capture of Chandernagore, and French ship *Indienne*. In 1756 Capture of Castle of Gheria, 1774 Mahratta War, capture of Tannah. Latter part of the eighteenth century, war with French and Dutch, Capture of Pondicherry, Trincomalee, Jafnapatam, Colombo, etc. 1801 Egyptian campaign under Sir Ralph Abercrombie. 1803 War with France. 1810 Taking of Mauritius and capture of French ship in Port Louis. Early part of the nineteenth century suppression of Jowasmi Pirates in the Persian Gulf. 1811 Conquest of Tara. 1813 Expedition against Sultan of Sambar. 1817-18 Mahratta War, capture of Forts at Severndroog. 1819 Expedition to exterminate piracy in the Persian Gulf. 1820 Capture of Mocha. 1821 Expedition against the Beni-koo-Ali Arabs. 1824-26 First Burma War. 1827 Blockade of Berbera and Somali Coast. 1835 Defeat of Beni Yas Pirate. 1838 Expedition to Afghanistan and capture of Karachi. 1838 Capture of Aden. 1840-42 War in China. 1843 Scinde War Battle of Meanee, capture of Hyderabad. 1845-46 Maori war in New Zealand. 1848-49 War in Punjab, siege of Mooltan. 1852 Second Burma War, Capture of Rangoon, Martaban, Bassein, Prome and Pegu. 1855 Persian War, capture of Bushire, Muhammerah and Ahwaz. 1856-57 War in China. 1857-59 The Indian Mutiny. 1859 Capture of the Island of Beyt. 1860 China War, Canton, Taku Forts, Fatshan and Peking. 1871 Abyssinian War. 1882 Egyptian Campaign. 1885

Egyptian Campaign. 1885 Third Burma War. 1889 Chin-Lshai Expedition. 1896 Suakin Expedition. 1897 Expedition to Imtirbe, Mombassa E. Africa. 1899-1902 S. African War. 1900-01 Boxer Rebellion in China; relief of Peking. 1902-04 Somaliland Expedition.

Service in the War 1914-18.—The Royal Indian Marine, though a small Service compared with the Army and Navy, has played a very active and conspicuous part in the European War. On the outbreak of the War the Service was under the administration of Captain (now Rear-Admiral) W. Lumsden, C.V.O., R.N., Director, Royal Indian Marine. Captain Lumsden retired on the 12th of February, 1918, and the post has since been held by Captain N. F. J. Wilson, C.M.G., C.B.E., R.I.M.

The first service performed by the Royal Indian Marine was the establishment at the large ports of Bombay, Calcutta, Aden, Karachi and Rangoon, of the Examination Service which in conjunction with the Military authorities safeguarded those ports from enemy action. Most of the larger ships of the Royal Indian Marine which are in peace times unarmed, and are employed in carrying troops, etc., were armed and fitted in the Government Dockyard at Bombay, and handed over to the Royal Navy for service as Auxiliary Cruisers. Most of the Royal Indian Marine personnel, both European and Indian, continued to serve on board these ships, some of which took part in actions. Early in 1915, the R.I.M.S. "Hardinge" took part in the defence of the Suez Canal, and was struck by a Turkish 8-inch shell on the starboard side, carrying away the fore funnel and part of the bridge. The "Comet" was sunk by the Turks during the battle of Ctesiphon in 1916. The "Lawrence" took part in the advance up the Tigris, and was in action at the taking of Kurna, and constantly under fire.

The chief service rendered by the Royal Indian Marine, however, has been in connection with **Marine transport work**. The Royal Indian Marine furnished base Transport staffs for Bombay, Karachi, Calcutta, Rangoon and Madras, as well as overseas staffs for Egypt, France, Mesopotamia and East Africa. The fitting out of ships as Transports for the conveyance of Troops, animals, stores, etc., from India to the different theatres of War overseas and *vice versa*, the loading and unloading of ships, and the several duties connected therewith were also carried out by the Royal Indian Marine. The number of vessels taken up and fitted out in connection with the despatch of the first lot of troops from India numbered over 260, but this did not finish the task allotted to the Royal Indian Marine, as after the despatch of troops, the necessary sea-transport for the carriage of reinforcements to the theatres of War had to be arranged for. The number of troops, animals, and stores, conveyed by these ships is recorded in the Military Department of Government, but the mere details of numbers scarcely conveys any idea of the sustained effort which the movement of these large numbers involved, and the work that was necessary to keep the

vessels in a state of repair and efficiency, all of which fell on the Royal Indian Marine.

Neither the capacity of the two Royal Indian Marine Dockyards at Bombay and Calcutta, nor the personnel of the Royal Indian Marine, which was just sufficient for carrying on its functions during normal times, and perhaps in minor expeditions, could be expected to cope with the large amount of responsible work detailed above, and to carry it out expeditiously, and at the same time efficiently. The administrative staff of the Royal Indian Marine, however, rose to the occasion, and by engaging a large number of extra personnel, and with the help of the Royal Engineer's Department Railways, and the Shipping Companies, performed the stupendous task with great credit to the Service, and to the benefit of the Empire.

Prize Ships.—On the outbreak of War, enemy vessels which were in Eastern Ports were seized and placed under the administration of the Director of the Royal Indian Marine. The number of vessels seized was 23, and this fleet represented a tonnage of over 1,00,000 and a value of over one million pounds sterling. The arrangement for the employment of this fleet was not an easy task. The enemy crew had to be replaced and the ships manned and fitted as expeditiously as possible. Though great difficulties were experienced, this was accomplished without any loss of time and the vessels were detailed for different duties. Very little is known to the public outside of the use which has been made of these Prizes. The valuable services rendered by this Fleet, and the important part it has played in the operations of the War, cannot be too highly spoken of. Besides the general Transport Service, they have performed duties as Colliers, Depot Ships, Prison Ships, Convalescent and Hospital Ships. It will be interesting to note that ships of the Bombay Prize Steamship Section were the first German Prizes to be utilised in the whole of the Empire. In order to relieve the congestion of cargo at Indian Ports due in a great measure to the removal of private vessels from Indian Trade for Imperial Transport Work, the Prize Ships for some time were also employed commercially. The Prize Ship Fleet has also sustained together with the shipping of the world its quota of losses due to enemy action, though fortunately the casualties in the personnel have been very few. The officers, engineers, and crew of the Merchant Service by whom the vessels are manned have maintained the best traditions of the Services to which they belong, by their devotion to duty. Many of them have earned an honourable mention in the official despatches.

River Transport.—In addition to the fitting out of vessels, arranging for their despatch and for the Transport Staff, the management of Prize Steam Ships, etc., the Royal Indian Marine Service was called upon to provide River Transport for the advance of the British Force in Mesopotamia, and also to organise a River Transport Service in that country. The difficulties encountered in obtaining suitable river craft in India capable of navigating the Tigris and Euphrates are well known and need not be recapitulated. As, however, the

demand was insistent such vessels as most nearly approximated to the required dimensions were taken up in India and despatched in tow to Mesopotamia. The despatch of this huge flotilla, which numbered over 800 vessels and barges, over a distance varying between 1,600 to 3,000 miles was a big undertaking and was not carried through without loss, owing to the frail nature of many of the craft which were unfitted to face sea conditions. With these craft as they arrived, a River Service was organised by the Royal Indian Marine, and when the conduct of operations was taken over by the War Office in August, 1916, they found a river transport service in existence, the efficiency of which their Officers have frequently recognised. India, however, continued to be the base of supply of troops and stores for Mesopotamia, and the fact that the War Office took over the operations, did not therefore relieve the strain on the Royal Indian Marine Services, whose work in carrying for tonnage, personnel, for ships, transport staff, etc., continued. The actual numbers of craft taken up and despatched to Mesopotamia were 1,093, including River Steamers, Tugs, Launches, Barges, Motor Boats of every size and description. The Royal Indian Marine also transferred 213 Officers (38 Permanent, 175 Temporary) to the War Office for service in Mesopotamia, when the latter assumed charge of the operations.

Work of the Dockyards.—Such is a brief record of the services rendered by the Royal Indian Marine Service to the Empire in this great war, but the record cannot be considered even partially complete, without special reference to the work of the Dockyards. These two establishments have been of inestimable value during the war. Besides undertaking the survey and fitting out of numbers of transports, the plans for fitting out by private firms of the remainder were all prepared by the Dockyard Officers, and their completion supervised by them. The immense flotilla for Mesopotamia nearly all passed through Dockyard hands, where they were docked, repaired and prepared for their sea voyage. Almost of greater importance are the repairs and overhaul of the East Indies Naval Squadron which is almost entirely dependent on Bombay Dockyard, for its repairs and stores. The fitting out of the mine-sweeping Flotilla was another of its energies and latterly the building of six Trawlers for the same work has been undertaken. In addition a considerable number of Barges, Oil flats, steam launches and Boats have been built for Mesopotamia.

In consequence of the discovery that an enemy vessel had laid mines in Eastern Waters, the Royal Indian Marine was called upon in February, 1917, to organise a Patrol and Mine-sweeping Service round the coast of India. Royal Indian Marine and Merchant Vessels were fitted up and utilised for the purpose. They were manned by Royal Indian Marine and Merchant Service personnel, but for certain purposes were placed under the orders of the Commander-in-Chief, East Indies, in April 1918.

In addition to this and the Examination Service, the Royal Indian Marine supplied the personnel for a Patrol Service in the Bay of

Bengal and on the Burma Coast to deal with the threat of the importation of arms into India. This Service remained in active employ until the danger was considered at an end.

Mention was made in Parliament of the good services rendered by the Royal Indian Marine in the War, and a large number of Royal Indian Marine Officers have been the recipients of honours for meritorious services, and both, they and other Royal Indian Marine personnel have several times been mentioned in despatches. The services of Warrant Officers and Crews have also been recognised by Government, by the grant of medals and in different other ways. 21 Officers, 9 Warrant Officers, and nearly 300 ratings have given their life in this War.

The numbers of Officers and Warrant Officers who have been the **recipient of honours** or been mentioned in despatches are as follows :—

OFFICERS.

Created	C. M. G.	..	..	3 Officers.
"	C. I. E.	..	..	7 "
"	C. B. E.	..	..	1 Officer.
"	O. B. E.	..	..	17 Officers.
"	M. B. E.	..	..	2 "
Awarded the	D. S. O.	..	..	12 "
"	D. S. C.	..	..	12 "
Mentioned in Despatches	..	..	..	19 "

WARRANT OFFICERS.

Mentioned in Despatches..	12	;;
---------------------------	----	----	----	----

PETTY OFFICERS AND MEN.

2,225 Recruited from the Ratnagiri District of the Bombay Presidency.

SHIPS.

Troopships	..	..	R. I. M. S. Dufferin*	..	6315 tons	..	10,191 Horse Power.
"	..	..	Hardinge*	..	5467	..	9,366 "
"	..	..	Northbrook.*	..	5048	..	7,249 "
Light-house Tender	..	..	Nearchus	..	491	..	753 " Persian G.
Station Ship	..	..	Dalhousie*	..	1524	..	2,200 "
"	..	..	Mayo	..	1125	..	2,157 " Rangoon.
Despatch Vessel	..	..	Lawrence*	..	903	..	1,277 "
Special Service..	..	..	Minto*	..	960	..	2,025 "
Surveying Ship	..	..	Investigator	..	1014	..	1,500 "
"	..	..	Palinurus	..	299	..	486 "
Station Ship	..	..	Sunbeam	..	334	..	70 " Port Blair.
River Steamer..	..	..	Bhamo	..	172	..	250 " Burma.
"	..	..	Sladen	..	270	..	360 " "

* On Special Service.

In addition to the above are 39 launches composed of special service launches; target towing tugs, powder boats, military service launches; etc.

Personnel, 1919.

DIRECTOR.

Captain N F. J. Wilson, C.M.G., C.B.E., R.I.M.
Office Residence, Government Dock Yard,
Bombay.

(The Director, R.I.M., advises the Government of India on all maritime matters.)

DEPUTY DIRECTOR.

Capt. B. H. Jones, R.I.M.

Assistant Director (Administration), A. A.
Whelan, Esqr.

CAPTAIN SUPERINTENDENT.

Captain D. F. Vines, O.B.E., R.I.M.; Off.
Residence, Marine House, Calcutta.

OFFICERS.

Commanders	..	..	..	..	33
Lieutenants and Sub-Lieutenants	..	..	..	..	72
Chief Engineers	..	..	..	..	10
Engineers and Assistant Engineers	..	..	..	..	75
Marine Survey	..	..	..	..	11

WARRANT OFFICERS.

Gunners	..	..	..	..	24
Clerks	..	..	..	..	21
Engine Drivers	..	..	..	..	2

Dockyards.

There are two Royal Indian Marine Dockyards at Bombay and at Calcutta, the former being the more important. There are 5 graving docks and a wet basin at Bombay, together with factories which enables the whole of the repairs for the ships of the East India Squadron of the Royal Navy and for the ships of the Royal Indian Marine and local Governments to be carried out, and tugs, lightships, pilot schooners, launches, etc., constructed.

PRINCIPAL OFFICERS, BOMBAY DOCK YARD.

R. I. M. Officers.

Superintendent, Comdr. C. A. Scott, D.S.O., R.I.M.

Inspector of Machinery, Engr.-Capt. C. F. Laslett, M.B.E.

CIVILIAN OFFICERS.

Chief Constructor, Mr. E. P. Newnham.

Constructor, Mr. W. J. Kenshett.

PRINCIPAL OFFICERS, CALCUTTA DOCKYARD.

R. I. M. Officers.

Staff Officer, Commander R. G. Strong, R.I.M.

Inspector of Machinery, Engr.:—Lt. Comdr. A. B. Collings, R.I.M.

CIVIL OFFICERS.

Constructor, Mr. D. H. North.

Appointments.

In addition to the regular appointments in the ships of the Royal Indian Marine, and in

the R. I. M. Dockyards, the following appointments under local Governments are held by officers in the Royal Indian Marine :—

BOMBAY.

Port Officer, Assistant Port Officer, 1st Engineer and Shipwright Surveyor and 2nd and 3rd Engineers and Shipwright Surveyors to the Government of Bombay.

CALCUTTA.

Port Officer, Deputy Port Officer and Assistant Port Officer, 1st, 2nd and 3rd Engineers and Shipwright Surveyors to the Government of Bengal.

BURMA.

Principal Port Officer, Burma; First Assistant Port Officer, Rangoon. Engineer and Shipwright Surveyor to Government of Burma.

Assistant. Do. do. do. do.

Port Officer, Akyab, Moulmein and Bassein. Marine Transport Officer, Mandalay, and Superintending Engineer, Mandalay.

MADRAS.

Presidency Port Officer and Deputy Conservator of the Port.

CHITTAGONG.

Port Officer, and Engineer and Shipwright Surveyor.

ADEN.—Port Officer.

KARACHI.—Port Officer.

PORT BLAIR.—Engineer and Harbour Master.

Finance.

The Indian rupee has touched two shillings and five pence*. The British sovereign, which commanded fifteen rupees little more than a year ago, is now worth only ten rupees—rather less as a matter of fact. To those who were involved in the desperate struggle of the Government of India, beginning with the closing of the Mints in 1893, to raise the rupee to one shilling and four pence and to keep it from falling below that ratio, the rise of the Indian Exchanges is a portent of great significance. There is a tendency to regard it as merely the expression of the rise in silver, which from an average of say 26*d.* an ounce has swollen to 78*d.* But this is one of those half truths almost more misleading than untruths. The economic force underlying the rise in the exchange is that India has during the war developed an amazing money power. The country, which before the war was the suppliant of London for a few beggarly millions of capital a year, has now £106 millions invested in British securities. The Mackay Committee reported that the maximum amount of capital, British and Indian, which could be raised for the Indian railways each year was £12½ millions, and even this figure was reached only by proposing an illegitimate raid on the fund created to safeguard against the depreciation of the rupee. In the 1919-1920 Indian Budget provision is made for a capital expenditure of £17½ millions on the railways besides an expenditure on renewals from revenue which brings the total of £24½ millions, without coming to London for a penny.

Increased Money Power.—We may consider for a moment the evidences of this increased money power before analysing the causes which have led to it and the problems which it creates. The revenues of India have risen from £80 millions in 1914-15 to £125 millions, in 1918-19. Part of this expansion is due to increased taxation. Thus in successive War Budgets the general tariff has been raised from 5% to 7½%; export duties imposed on tea and jute, and more recently on hides; the income tax revised and graded (with simultaneously a great measure of relief to assesses with small incomes); a higher salt duty and a railway surtax levied; and a 50% excess profits tax imposed. But at the same time there has been a steady expansion in the ordinary revenue and a solid development in the profits on the railways. The country is now reaping the benefit of the wise policy pursued by Government in the face of great discouragement, and the railways contributed last year £6.9 millions to the general revenues of the State. The Indian debt is relatively insignificant. Before the war the debt of India was almost entirely represented by railways and irrigation works, the normal revenue of

which was in excess of the interest on the whole debt, including the interest on the small unproductive debt. At the end of September 1918 the Indian debt amounted to £370 millions, or about £1.10.0 per head of the population. Even after India's contribution of £100 millions to the cost of the war, which added at a stroke over 30 per cent. to the national debt, the revenue from productive expenditure exceeded the total interest charged by 33 per cent. Had it not been for this contribution, the ordinary debt would have been extinguished in 1917; in March 1918 the amount of the ordinary debt outstanding was £11 millions less than the contribution itself. If a valuation were made of the national assets to-day, it is not unfair to say that they would not fall far short of, even if they did not equal, the total amount of the national indebtedness.

Evidences of Strength.—These evidences lie on the surface; there are others less conspicuous, but none the less significant. In common with the rest of the world, the Paper Currency Reserve has vastly expanded during the war. But whereas other countries have issued and are issuing enormous masses of paper money against the general credit of the State, the Indian Note Issue is secured, except as to a small sum against metal or first class securities. The increased money power of the country is still more strongly reflected in the ease with which large capital issues are now made. In 1914 the Finance Member succeeded in floating a £4 million Government Loan, the largest official borrowing in one year in the financial history of India. In 1917 and 1918, the exigencies of the war forced on India a much more ambitious loan programme, and the country readily responded. The 1917 loan yielded £35½ millions, and the 1918 loan £38 millions. So free was the supply of money that, with skilled official management these large sums were taken off the market without any disturbance of the ordinary machinery of credit.

In the matter of private enterprise the change is no less marked. Few, outside the small circles of those directly interested, have any conception of the enormous financial difficulties in which the indigenous manufacturing industries of India grew. The ordinary machinery was for the promoter of a mill or a factory to put up what money he could himself, and then almost beg from his friends just a sufficiency of capital to furnish credit for the balance of the capital cost. Most Indian enterprises were established with a small fixed capital and a large capital debt, either in the form of borrowings from depositors or the banks, in the expectation of liquidating these debts out of profits. The wealthiest promoter considered

* The study of Indian figures is complicated by the state of the Exchanges. Indian accounts are presented partly in rupees, partly in sterling. In all official papers, rupees are converted into sterling at the official rate, 15 to 1. At this rate a lakh of rupees represents £6,666, and a crore £666,666. But the rupee having risen to two shillings and then to two shillings and five pence the conversion rate is altered. At two shillings a lakh of rupees represents £10,000, and a crore £1,000,000.

himself fortunate if he raised a hundred thousand pounds for a promising venture. The Tata Iron and Steel proposition and the Tata Hydro-Electric Scheme—the first scheme to harness the prodigious rainfall of the Western Ghats—were hawked round the city of London in vain, because no one dreamed that the requisite capital would be forthcoming in India. The flotation of these schemes, with Indian capital and under Indian management, was the turning point in Indian industrial enterprise. Indian capitalists now think in millions where they blenched at the mention of a hundred thousand pounds. In the financial boom which is passing over India, and in particular over Bombay, new flotations are reported to have aggregated £60 millions. There is, of course, a large element of speculation in these flotations, but behind them is a very solid basis of prosperity, immediate and prospective. In no respect is this revolution—for it amounts to nothing less—in the economic situation of India more marked than in the increased resistance of the people to famine. 'Until quite recent times, say ten years, Indian budgeting was, as a Finance Minister described it, "a gamble in rain." When the rain failed, the whole social structure of a people, 70% of whom are still dependent on agriculture for their means of livelihood, was shaken to its foundations. None who lived through the famines of 1896-97, and 1899-1900, and the lean years which followed, can ever forget the tragedy of those awful times. Since 1900 the famine-resisting power of the country has steadily grown. In 1918, for example, the rainfall was 19% in defect, the highest deficiency since 1899. But whereas in 1899 the failure of the rains brought no fewer than 4,500,000 souls on the mercy of the State for their daily bread, in 1918-19 the total number of recipients of State was slightly under 600,000. There has been a further and equally remarkable change. The earlier famines were not food famines but money famines; there was always enough food in the country to go round, the problem was to find a substitute for the earning power destroyed by the absence of rain and to transport the food to the areas in need of it. The shortage in 1918-19 was less of money than of food; the country was short of stocks owing to the large exports to Great Britain and Allied countries, and to the armies in the fields. For the first time it was necessary for Government to import food—wheat from Australia—on a large scale. The extension of irrigation, the growth of manufacturing industry and the money which has poured into the country in payment for its produce at high prices have had the effect of increasing the resisting power of the people in a remarkable degree.

Causes of the changes.—What is the cause of these extraordinary changes, where, if they are understood—they are only dimly appreciated even in India itself—they have taken the world by surprise? They are in large part the normal and gradual evolution of Indian economic conditions; they have been forced to the front in the economic hothouse of the war. In the main they are the fruit of the rise in the value of almost every variety of agricultural produce. In normal years India has a large surplus of wheat, rice, cotton, jute, oil-seeds and hides and skins to export. These are in world demand

at high and rising prices. Take for instance a single great staple like cotton. The value of the cotton exported has risen from £7.5 millions in 1899 to £28.4 millions in 1917-1918. What is true of cotton is true in greater or less degree of all other staples. Simultaneously there has been a marked increase in the area under irrigation. In 1901, when Lord Curzon appointed a Commission to formulate a definite irrigation policy, the area watered by the great State works was 18½ million acres; in 1916-17 it was 26 million acres, and the value of the crops raised £60 millions. Nor is this all. There has been a great increase in the area under private irrigation—tanks and wells—and in the Native States, where Mysore and Gwalior have set an inspiring example. Some day justice will be done to the work of the great engineers in the Punjab, where millions of acres of desolate waste have been converted into wheat lands of amazing fertility; where the waters of the Jhelum in the North have been carried through mountains and across rivers to reclaim the arid tracts of the Lower Bari Doab; and where a Province with a poor and congested population has been converted into a region of great agricultural prosperity, one-third of which is protected against any failure of the rains. Cast in a less heroic mould, but not less beneficial in its results, is the chain of works in Western India, which are storing the abundant rainfall of the hills and spilling it in the region of uncertain rainfall, preserving for ever from the effects of drought districts of which it used to be truly said that they expect a famine once in every three years—and get it. There has been a corresponding development in the manufacturing power of India. Next to agriculture, the greatest industry is the manufacture of cotton yarn and cloth. In 1900 the spindles in India numbered 4,945,783 and the looms 40,124; on August 31st, 1917 the figures were 6,738,697, and 114,621, whilst the average number of hands employed had risen from 161,189 to 276,771. The employees in the Jute mills increased from 114,200 to 262,600. In the same period other branches of industry have been opened up. A substantial beginning has been made with the all-important iron and steel industry; when the works actually in hand are complete the production of finished steel will be 1,250,000 tons per annum; cement is being manufactured in considerable quantities; and scores of new manufacturing enterprises are being promoted. These are conditions which produced a balance of trade in favour of India of £260 millions in the five years ended 1914. All these forces were stimulated during the war. Even under control, the prices of all agricultural products swelled to dazzling proportions. The reduction or cessation of foreign competition induced an insatiable demand for Indian manufactures. The jute trade was the first to feel the stimulus and it is officially estimated that the profits on the industry from 1914 to 1917 were just about of £20 millions. The cotton trade responded more slowly to the artificial heat of war, and it was not until 1917 that the tide turned. Now it is on the flood tide of roaring prosperity. Moreover the effect of trade conditions was accentuated by the very heavy expenditure in India on behalf of the Home Government for food and military ser-

vices, which aggregated £200 millions. There is one further important factor to be noted. In normal years the net balance of trade in favour of India is largely liquidated by imports of gold and silver. But during the war the free movement of gold and silver was by successive stages reduced and ultimately prohibited. During the war period, whilst the balance of trade in favour of India was approximately the same, the imports of the precious metals declined by two-thirds. The remainder of the balance of trade, and the expenditure in India on behalf of the British Government has not been paid for in cash or by a British Government loan in India, but by credits abroad by Government. This explains why such very heavy Indian balances are held in London—Treasury £3.7, millions, Paper Currency Reserve (securities) £54.9 millions, and Special Reserve £6.9 millions, the whole amounting with the Gold standard Revenue on the 31st March to £106 millions.

Currency Difficulties.—These conditions, whilst indicating the steady rise of India into a money power, have brought their own problems in their train. The greatest of them, to use the words of the recent Finance Member, is to get Indian Currency habits back to a sounder basis. The determination to finance the balance of trade in favour of India, and the balance of expenditure for the Imperial Government in India by Government credits abroad has raised a serious crop of Currency and Exchange difficulties. Despite the most prodigious coining in the history of the world—between August 1st, 1914 and March 31st, 1918 over 270 million ounces of silver passed into circulation—the provision of coin did not equal the demand. In May 1918 India hovered on the brink of inconvertibility and the facilities for the encasement of Notes were so reduced that over wide areas the Note went to a discount. Inconvertibility was staved off only by the acquisition of 200,000 ounces of the silver dollar reserve held in the United States. The prodigious Indian demand is one of the factors which has induced the rise in silver from 26*d.* to 68*d.* per ounce. Despite these enormous purchases of silver the metallic backing of the Note issue has diminished during the war period from 78% to 36%. The great aim must be to wean India from this excessive dependence on the precious metals, which is not only embarrassing but exceedingly wasteful. The first and most obvious measure is the extension of the banking organisation, which is miserably inadequate. In all India at the present time there are only about ninety head offices of banks and some three hundred branches. The proportion of towns with a population of over 10,000, in which banks and their branches are situated, is only 20 per cent. In 23 per cent. of the 70 towns with a population of over 50,000, there are no banks at all. In hundreds of busy centres in India there are no reliable banking facilities; cases have been reported where persons of means have actually paid for the custody of their money. It is often argued that the better mobilisation of Indian credit would still have the balance of trade to be adjusted in the precious metals. That is not so. With her wealth effectively organised, India would be in a position enormously to expand her demand for

manufactured goods, either under the auspices of the State for works like railway and irrigation development, or through joint stock companies for machinery to develop her industries; to buy back her foreign debt; and even to invest abroad. The next step is to increase confidence in the Note issue by strengthening the metallic backing to the Paper Currency. The signs are encouraging; amid the many disturbances of the war the net Note circulation has risen enormously; the gross circulation of one rupee Notes, under very unfavourable circumstances, from their first issue in December 1917 reached Rs. 1051 lakhs in March 31st, 1919. Further, measures must be taken to return the £54.9 millions of the Paper Currency Reserve, now held in London chiefly in the form of British Treasury Bills, to India, either as gold, or in the shape of a British Government loan in India. Finally, the standard of value, based on the one and four penny rupee, the goal of our currency policy from 1903 to 1918, must be restored, and security extended to nascent industries by conferring on the Government of India the full measure fiscal freedom which the country so insistently demands.

Future Demands.—One subsidiary point needs to be made clear. Viewing the financial and economic position of India to-day, especially her comparative freedom from unproductive debt, many will say, many are saying, that she has not contributed her share towards the common burdens of the war. Such remarks are based on ignorance. If India had only remained tranquil she would have rendered immense services to the Empire. She not only remained tranquil, despite the artful seductions of our enemies, but she did all she was asked to do and more. Her troops served in every fighting zone, from Flanders to Shantung. She cheerfully undertook a contribution of £145 millions towards the cost of the war. That may seem a meagre sum in comparison with the £8,000 millions of British war debt; it is not a small sum for a country where, according to the last official estimate, the average annual income is only Rs. 30 per head of the population. The favourable financial position of India is the fruit of skilful and conservative finance in the past. Has not that finance been too conservative? Let us look at the state of those agencies which are the foundations of national well-being. Only 6 per cent. of the Indian population is literate; whilst numerically the position in regard to higher and secondary education is not unsatisfactory, the state of primary education is deplorable. The expenditure on education from all sources is less than £8 millions, or 7½*d.* per head of the population. India has now reached a stage when the progressive forces are arrested by illiteracy. The standard of sanitation, urban and rural, is deplorably low. The country is consequently susceptible to fearful and devastating epidemics. The contribution of India to the war then was not a contribution from a superfluity, but was diverted from stark necessities. All the revenue which India can develop for the next generation—and more—will be required to educate, house, and provide healthy surroundings for her people; any growth of revenue which may accrue ought to be supplemented by loans in order to quicken the pace.

Twelve Years' Finance.

We may now turn to the financial results of the last twelve years in pounds sterling.

—	Revenue.	Expenditure.	Surplus.
	£	£	£
1908-9 ..	69,800,000	73,500,000	*3,700,000
1909-10 ..	74,600,000	74,000,000	600,000
1910-11 ..	80,300,000	76,900,000	3,400,000
1911-12 ..	82,835,750	78,895,416	3,940,334
1912-13 ..	86,985,300	83,623,400	3,361,900
1913-14 ..	84,262,000	83,675,000	587,000
1914-15 ..	80,156,000	85,115,000	*4,959,000
1915-16 ..	82,620,000	85,204,000	*2,644,000
1916-17 ..	96,834,900	91,017,000	5,817,500
1917-18 ..	112,662,347	104,575,273	8,087,074
1918-19 ..	121,500,500	125,851,100	*4,350,600
1919-20 ..	123,190,800	122,322,700	868,100

* Deficit.

Provincial and Imperial—At this stage one point should be made clear. Study of the figures often reveals a baffling discrepancy between "Imperial" and "Imperial"-cum-Provincial balances. This arises from the intermingling of Provincial with Imperial finance. During the halcyon years when large surpluses accrued to the treasury from the opium surpluses and the general prosperity of the country, the Government did not reduce taxation, but devoted these surpluses in part to the extinction of floating debt and the avoidance of further debt by financing public works from revenue and in part to large grants to the Local Governments for ameliorative works, chiefly in improving education and sanitation. But the spending of this money involved long preparation, with the result that the Local Government accumulated very large balances in excess of the normal. Further, owing to the establishment of a regime of strict official economy, the Provinces have expanded their balances out of current revenues.

First War Budget.—These factors reflected in the Budget of 1914-15—the Indian financial year closes on March 31st—produced a deficit of £4,959,000. The most rigid economy failed to balance the Budget estimates for 1915-16 by £3,833,000. The Government had therefore to decide whether they would meet the actual and prospective deficits by borrowing or by the imposition of fresh taxation. They speculated on the assumption that the war would be over before the close of the year, and decided to meet the deficits by temporary and permanent borrowing. For this they had justification. In the past, it has been the practice of the Government of India to use their surpluses largely for the avoidance of debt for the construction of reproductive works, and at the same time to meet any deficit not by temporary borrowing,

but by additional taxation; it was therefore only an act of justice to meet what was expected to be a temporary war deficit by borrowing. Government therefore proposed to continue the loan of £7 millions from the Gold Standard Reserve, to renew the £7 millions of floating debt in London, to borrow £3 millions in India and £6½ millions in London. In these ways they expected to maintain a fair scale of expenditure and a reasonable outlay on reproductive works without recourse to fresh taxation.

Second War Budget.—The Budget of 1915-16 having been based on the assumption that the war would be over before the close of the financial year, it was obvious that fresh taxation would be necessary to meet the conditions arising out of the prolongation of hostilities. Moreover there were certain adverse circumstances in the year. The monsoon rains were not good. The Customs revenue showed a certain decline. The railway receipts were good; this has now become an important head in the Indian Budget, whereas in past years the railways did not pay interest charges; the larger revenue arose in part from a brisk internal trade and in part from the substitution of rail-borne for sea-borne coal from Bengal to the chief consuming centres. The borrowing programme was interrupted. In the Budget, the Secretary of State calculated on borrowing £6½ millions; in practice he raised only £3.1 millions. Rigid economy was exercised in the capital programme; for instance the railway budget was reduced from £8 millions to £4.9 millions, and the expenditure on irrigation was cut down from £1.1 million to £.9 million. The military expenditure was also much heavier than was anticipated. Whilst therefore the budgetted revenue rose from £80.4 millions to £82.62 millions and the expenditure from £84.435 millions to £85.264 millions, the deficit was £2,644 millions. On a cautious estimate of revenue and expenditure with the existing scale of taxation the close of the financial year 1916-17—March 31st, 1917—would have found the State with a further deficit of £2.96 millions. Reference has been made to the fact that in India in time of crisis the State is a lender rather than a borrower; also to the fact that there was a large temporary debt—£7 millions in London and a like sum in India. It was therefore of the first importance to impose new taxation and to discharge as much temporary debt as possible.

The New Taxes.—The new taxes took the general form of an addition to the tariff. It is explained in the section on Customs (*q. v.*) that the Indian tariff is one for revenue purposes, that it is based on a general import duty of five per cent. with a special tariff of three and a half per cent. on cotton piece-goods and a large free list. The Budget raised the general tariff to seven and a half per cent., except in the case of sugar, which was raised to ten per cent. The free list was also reduced and special tariffs arranged for wines and spirits and tobacco. To this general rule, however, one important exception was made: the import duty on piece-goods stood at the old figure of three and a half per cent. These additions were estimated to produce £410,000. Export duties were also imposed on two flourishing staples, tea to the extent of Rs. 1-8-0 per 100 lbs., raw

jute Rs. 2-4-0 per bale of 400 lbs., equivalent to five per cent., and in the case of manufactured jute Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians. The whole yield from the revision of the tariff was put at £2·1 millions. The salt tax had been steadily reduced from Rs. 2-8-0 per maund of 82 lbs. to Re. 1; as this has always been reckoned a war tax, an addition of four annas a maund to the duty was made, estimated to yield £600,000. The income-tax was also revised and further graduated. Under the old schedule incomes of Rs. 1,000 and under were exempt. Incomes above that figure paid either four or five pies in the rupee; roughly speaking the income-tax may be taken as five pies in the rupee or six pence in the pound. The new proposals left all incomes of Rs. 5,000 and under untouched. Incomes of Rs. 5,000 to Rs. 9,999 were charged six pies or seven pence halfpenny in the pound; incomes of Rs. 10,000 to Rs. 24,999, nine pies in the rupee or elevenpence farthing in the pound; and incomes of Rs. 25,000 and upwards one anna in the rupee or one and three pence in the pound. Profits on companies were charged the anna rate.

Financial Effect.—To sum up the financial effect of the proposals above explained, Government aimed at an additional revenue of—

- (a) £2,150,000 from Customs and consequential changes in the excise duties on liquors.
- (b) £600,000 by an enhancement of the duty on Salt.
- (c) £900,000 by an increase under Income Tax.

Or in all a little over £3·6 millions as against an estimated imperial deficit of £2·6 millions. This left an Imperial surplus of £1,052,000 which, though somewhat less than aimed at in the years just preceding the war, supplied a useful and much needed source of strength against contingencies.

Third War Budget.—The second war budget anticipated a revenue of £ 86·5 millions, an expenditure of £ 86 millions, leaving a surplus of £ 473 million; the revenue actually received was £ 96·7 millions, the expenditure was £ 89·4 millions, leaving a surplus of £ 7·2 millions. The agricultural year was an exceptionally good one; despite the inevitable restrictions on trade, there was a considerable recovery; and these conditions were reflected in the revenue. Nearly half the expansion was due to a phenomenal increase of over £4 millions from railways. The more favourable trade and economic conditions, coupled with the removal of competition from the coastwise traffic, caused the railway receipts to attain an unprecedented figure. The new taxes imposed in the Budget were estimated to yield £ 3·6 millions; the actual yield was £ 1,200,000, more of which £ 200,000 occurred under salt, £ 650,000, under customs, and £ 350,000, under income tax. The greater part of the increased expenditure was under military charges. On capital account it was estimated that there would be an expenditure of £ 6·6 millions, including £ 2 millions for the discharge of debt; the capital expenditure was £ 15·8 millions, mainly due to increasing the discharge of debt from £ 2 millions

to £ 11·6 millions. The Budget for 1917-18 provided for a revenue of £ 98·8 millions, an expenditure of £ 98·819 millions, leaving a surplus of £ 0·032 million. To appreciate these figures we must turn to what was the dominating feature of the Third War Budget namely India's contribution to the War.

India's contribution to the war.—The Finance Member explained that the Government of India had been taken to task for not contributing more liberally to the cost of the war. Section 22 of the Government of India Act forbids the application of the revenues of India, to defraying the expenses of any military operations carried on beyond her external frontiers, otherwise than for repelling or preventing actual invasion, without the specific approval of both Houses of Parliament. By special resolution of Parliament India had paid the ordinary charges of the troops employed out of India, and up to the end of the year India has contributed in this manner a sum of £ 11½ millions, to which would be added in the ordinary course of the year 1917-18 a sum of £ 4 millions. But the Government of India had always felt that if their circumstances warranted it they should take up the question of making a further direct contribution towards the struggle and at the beginning of January the Viceroy addressed the Secretary of State a telegram offering to accept an ultimate total special contribution of £ 100 millions to the war. This would involve an annual payment of £ 6 millions in interest and sinking fund charges. On the existing basis of taxation the Budget was estimated to produce a surplus of £ 2½ millions; but it was necessary to provide £ 3 millions for interest and sinking fund charges, so another £ 3 millions would have to be raised by taxation.

The new Taxes.—The natural manner of raising the bulk of this additional sum was the imposition of an excess profits tax; but this was put aside, both because of the absence of the necessary administrative machinery, and because the charge was a permanent one, which would continue after the excess profits due to the war had ceased to operate. It was therefore proposed to establish a super-tax. The rate of income tax established in the Budget of 1916-17 ran on a graduated scale of four pies in the rupee to one anna, which last sum was made payable on incomes of Rs. 25,000, and over. The ordinary rate of income tax was maintained. In explaining his proposals in detail the Finance Member said:—

“The super-tax will begin in respect of income exceeding Rs. 50,000 and will then be levied in an ascending scale as shown below:—

For every rupee of the first Rs. 50,000 of the excess, *i.e.*, between Rs. 50,000 and 1 lakh. 1 anna per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 1 and 1½ lakhs. 1½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 1½ and 2 lakhs. 2 annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between Rs. 2 and 2½ lakhs. 2½ annas per rupee.

For every rupee of remainder of the excess, *i.e.*, on everything over Rs. 2½ lakhs. 3 annas per rupee.

"These rates will be in addition to the one anna income tax, so that a person possessing an income exceeding Rs. 2½ lakhs will pay in all a rate of 4 annas per rupee (equivalent to 5s. in the pound) on that excess; while as regards each half lakh making up the first Rs. 2½ lakhs he will pay rates varying from 1 anna (*i.e.*, ordinary income tax alone) on the first to 3½ annas on the last. He is still favourably situated as compared with the wealthy taxpayer in England whose ordinary income tax would reach 5s. in the pound, while the super-tax might extend to anything up to 3s. 6d.

"The materials for an estimate of the probable yield of the super-tax are not as adequate as we should have wished owing to the fact that under the existing Act the profits of companies and interest on securities are assessed to income-tax at the source without reference to their ultimate destination, so that we have no particulars of their distribution between people who will in future be liable to the super-tax and those who will not be liable. On such information, however, as we can obtain we take the probable yield at £ 1,350,000.

"The next source from which we propose to raise revenue is the export tax on jute. This was imposed in the current year at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute, with a special rate of 10 annas per bale on cuttings; and as regards manufactured jute at Rs. 10 per ton on 'sackings' and Rs. 16 on 'hessians.' Having regard to India's monopolist position in respect of jute production, which enables taxation to be normally passed on to the consumer, we propose to double the rates abovementioned and thus to obtain an additional revenue of £ 500,000.

"The taxation already described will yield us in all £ 1,850,000. The way in which we propose to make the bulk of the remaining provision required is one which will, I think, be received with satisfaction in this Council and in the country generally, while the incidence of the tax will be of much more general application than that of the imposts above described. It will be remembered that in introducing the Financial Statement for the current year, I said that we had been anxious to raise the duty on imported cotton goods, while leaving the cotton excise duty, which has formed the subject of such widespread criticism in this country, unenhanced, subject to the possibility of its being altogether abolished when financial circumstances are more favourable. But His Majesty's Government held that in the then circumstances such a course would be undesirable, and decided to leave the cotton duties question to be considered later on 'in connection with the general fiscal policy which may be thought best for the Empire and the share, military and financial, that has been taken by India in the present struggle'. To-day I am able to announce that in view of the taxation required to make our war contribution worthy of India and of the place we desire her to hold in the Empire, His Majesty's Government have now given their consent to our raising the

import duty on cotton goods from 3½ per cent. as it now is, to 7½ per cent, which is our present general tariff rate. The cotton excise duty will remain at 3½ per cent. There can be no question of our doing away with an impost which is estimated to produce about £ 320,000 next year at a time when we have to impose extra taxation. By this means we estimate that we can get an additional £1 million. I am sure that the action of His Majesty's Government, following as it does on their recent association of India with the special Imperial Conference called in connection with the war and the measures to be taken thereafter, will meet with the greatest appreciation in India.

"Finally, we have decided to impose, as a war measure, a surcharge on railway goods traffic at the rate of one pie a maund on coal, coke and firewood and two pies a maund on other articles. We have advisedly taken a low uniform rate so as to avoid, as far as possible, the necessity for special adjustments in regard to short distances or particular classes of traffic. Some details in respect of this taxation are still under consideration, but the action necessary in connection with its imposition will be taken as soon as possible. The yield is estimated approximately at £½ million, and we thus obtain the amount that we require to finance our War contribution, and leave ourselves with a surplus £130,000, which is little enough having regard to the circumstances of the time."

Fourth War Budget.—The fourth war budget presented fewer features of special interest, and it contained no surprises, save the pleasant one that when everyone was expecting an increase in taxation none was found necessary. As is shown above, the estimated revenue was £98.8 millions; it amounted to £110.4: the estimated expenditure was £98.8 millions; it amounted to £102.3: the estimated surplus was £.088 million: it amounted to £ 8 millions. With this substantial sum in hand the Finance Member found himself able to meet the whole of his estimated revenue expenditure without imposing any additional taxation. The principal contributors to the increased revenue were railways, salt, income-tax, and customs; the larger expenditure was almost entirely on military expenses. The chief feature in the financial history of the year was in the section of the Budget which is called Ways and Means, and which deals with the capital account. The ordinary transactions under this head are between twenty and thirty millions sterling; owing to the very heavy expenditure in India on account of the Home Government they amounted in the previous year to £111 millions. This tremendous sum, for India, was met by the proceeds of the war loan £36½ millions; revenue £31½ millions; Treasury Bills £30 millions; coinage £ 13 millions; and investments in London on behalf of the Paper Currency Reserve £ 8.7 millions. The Ways and Means section also constituted the principal problem of the Budget of 1918-19. The sum which had to be met was put down at £78 millions, which it was proposed to meet as to £22.1 from revenue; £20 from borrowing in India; £13 inspecie for coinage; £16 from further investments on behalf of the Paper Currency Reserve; and £5 millions from balances.

The details of the budget are set out in the following table. As the manner in which the great heads of income like land revenue, railways, irrigation and customs are realised is described in separate articles (*q. v.*) they need not detain us here:—

	Accounts, 1917-1918.	Revised Estimate; 1918-1919.	Budget Estimate; 1919-1920.
REVENUE.			
Principal Heads of Revenue—	£	£	£
Land Revenue	21,607,246	20,945,500	22,653,100
Opium	3,078,903	3,229,000	3,056,200
Salt	5,499,487	4,176,300	3,914,300
Stamps	5,727,522	5,896,500	6,097,100
Excise	10,161,706	11,541,300	12,133,300
Customs	11,036,588	12,603,200	13,352,400
Income Tax	6,308,104	7,300,900	13,521,500
Other Heads	3,885,177	4,094,600	4,568,900
TOTAL PRINCIPAL HEADS ..	67,304,733	69,787,300	79,296,800
Interest	2,170,108	4,020,800	3,637,400
Posts and Telegraphs	4,616,690	5,322,800	5,716,800
Mint	517,401	1,716,800	1,303,200
Receipts by Civil Departments	1,935,364	2,086,600	1,957,500
Miscellaneous	4,868,356	5,771,000	2,507,400
Railways: Net Receipts	24,141,708	25,347,400	21,372,900
Irrigation	5,063,879	5,402,200	5,498,600
Other Public Works	323,599	331,900	312,900
Military Receipts.. .. .	1,720,509	1,713,600	1,587,300
TOTAL REVENUE ..	112,662,347	121,500,500	123,190,800
DEFICIT ..	....	4,350,600	....
TOTAL ..	112,662,347	125,851,100	123,190,800
EXPENDITURE.			
Direct Demands on the Revenues	9,854,695	11,676,600	11,293,300
Interest	7,328,169	7,733,200	7,763,500
Posts and Telegraphs	3,567,730	4,116,500	4,580,200
Mint	167,382	267,000	284,500
Salaries and Expenses of Civil Departments.. .. .	20,855,368	24,474,800	24,336,400
Miscellaneous Civil Charges	5,918,707	6,130,700	6,115,700
Famine Relief and Insurance	1,000,000	1,000,000	1,502,400
Railways: Interest and Miscellaneous Charges	14,227,385	14,154,000	14,468,900
Irrigation	3,784,838	3,988,300	4,075,400
Other Public Works	5,048,294	5,596,800	6,761,400
Military Services	30,763,650	45,639,600	42,782,300
TOTAL EXPENDITURE, IMPERIAL AND PROVINCIAL	102,516,218	124,777,500	123,964,000
<i>Add—Provincial Surpluses, that is, portion of allotments to Provincial Govern- ments not spent by them in the year.</i>	2,256,623	1,165,900	11,500
<i>Deduct—Provincial Deficits, that is, portion of Provincial Expenditure defrayed from Provincial Balances</i>	197,568	92,300	1,652,800
TOTAL EXPENDITURE CHARGED TO REVENUE.	104,575,273	125,851,100	122,322,700
SURPLUS ..	8,087,074	....	868,100
TOTAL ..	112,662,347	125,851,100	123,190,800

Fifth War Budget.—The fifth war budget was presented after the conclusion of the Armistice, and consequently after the termination of hostilities. Indeed it was placed before India shortly before the actual signature of peace. Nevertheless it was a war budget, and the war will continue to dominate Indian finance for at least another year. It had another and very unwelcome feature. Reference has been made to the great influence of the rains on a country where seventy per cent of the population is still dependent on agriculture for its means of livelihood. During the earlier war years the seasons were in good; in 1918 the rains failed over a large portion of the country, and were nineteen per cent. in defect on the whole. This is the heaviest deficiency since the great famine of 1899-1900. Although the resisting power of India to famine has greatly increased owing to the spread of irrigation and the store of money accumulated owing to the high prices of all kinds of agricultural produce, such a shock seriously

affects the finances. Further dislocations were caused by the interference to trade caused by the sudden cessation of hostilities and the undertaking by the Indian Government to bear the cost of the additional troops required for the defence of India to the extent of forty-five millions sterling, spread over three years. Nevertheless even under these strains the finances of the country showed great resiliency. The budgeted revenue was £109 millions, the actuals were £121 millions; the budgeted expenditure was £106 millions; the actuals were £121 millions; the estimated surplus was £2.5 millions; the deficit was £4.3 millions. This deficit, caused by the additional military burden imposed, was met by the imposition of an Excess Profits tax amounting to fifty per cent. For the ensuing year the estimated revenue is £123 millions, the estimated expenditure £122 millions, and the estimated surplus £863,000.

THE LAND REVENUE.

The principle underlying the Land Revenue system in India has operated from time immemorial. It may be roughly formulated thus—the Government is the supreme landlord and the revenue derived from the land is equivalent to rent. On strictly theoretical grounds, exception may be taken to this statement of the case. It serves, however, as a substantially correct description of the relation between the Government and the cultivator. The former gives protection and legal security. The latter pays for it according to the value of his holding. The official term for the method by which the Land Revenue is determined is "Settlement." There are two kinds of settlement in India—Permanent and Temporary. Under the former the amount of revenue has been fixed in perpetuity, and is payable by the landlord as distinguished from the actual cultivator. The Permanent Settlement was introduced into India by Lord Cornwallis at the close of the eighteenth century. It had the effect intended of converting a number of large revenue farmers in Bengal into landlords occupying a similar status to that of landowners in Europe. The actual cultivators became the tenants of the landlords. While the latter became solely responsible for the payment of the revenue, the former lost the advantage of holding from the State. This system has prevailed in Bengal since 1795 and in the greater part of Oudh since 1859. It also obtains in certain districts of Madras.

Temporary Settlements.

Elsewhere the system of Temporary Settlements is in operation. At intervals of thirty years, more or less, the land in a given district is subjected to a thorough economic survey, on the basis of the trigonometrical and topographic surveys carried out by the Survey Department of the Government of India. Each village area, wherever the Temporary Settlement is in vogue, has been carefully mapped, property-boundaries accurately delineated, and records of rights made and preserved. Under the Permanent Settlement in Bengal the occupant does not enjoy these advantages. The

duty of assessing the revenue of a district is entrusted to Settlement Officers, members of the Indian Civil Service specially delegated for this work. The duties of a Settlement Officer are thus described in Strachey's *India* (revised edition, 1911):—"He has to determine the amount of the Government demand, and to make a record of all existing rights and responsibilities in the land. He has a staff of experienced subordinates, almost all of whom are natives of the country, and the settlement of the district assigned to him is a work which formerly required several years of constant work. The establishment of agricultural departments and other reforms have however led to much simplification of the Settlement Officer's proceedings, and to much greater rapidity in the completion of the Settlements. All the work of the settlement officer is liable to the supervision of superior officers, the assessments proposed by him require the sanction of the Government before they become finally binding; and his judicial decisions may be reviewed by the Civil Courts. It is the duty of the settlement officer to make a record of every right which may form the subject of future dispute, whether affecting the interests of the State or of the people. The intention is to alter nothing, but to maintain and place on record that which exists."

The Two Tenures.

Under the Temporary Settlement land tenures fall into two classes—peasant-holdings and landlord-holdings, or *Ryotwari* and *Zemindari* tenures. Broadly speaking, the difference between the two in a fiscal sense is that in *Ryotwari* tracts the *ryot* or cultivator pays the revenue direct; in *Zemindari* tracts the landlord pays on a rental assessment. In the case of the former, however, there are two kinds of *Ryotwari* holdings—those in which each individual occupant holds directly from Government, and those in which the land is held by village communities, the heads of the village being responsible for the payment of revenue on the whole village area. This latter system prevails in the North. In Madras,

Bombay, Burma and Assam, ryotwari tenure is on an individual basis, and the Government enters into a separate agreement with every single occupant. The basis of assessment on all classes of holdings is now more favourable to the cultivator than it used to be. Formerly what was believed to be a fair average sum was levied on the anticipated yield of the land during the ensuing period of settlement. Now the actual yield at the time of assessment alone is considered, so that the cultivator gets the whole of the benefit of improvements in his holding subsequently brought about either by his own enterprise or by "unearned increment." The Government, however, may at a new settlement re-classify a holding so as to secure for itself a fair share in an increment that may have resulted from public works in the vicinity, such as canals and railways, or from a general enhancement of values. But the principle that improvements effected by private enterprise shall be exempt from assessment is now accepted by the Government and provided for in definite rules.

Incidence of the Revenue.

The incidence of the revenue charges varies according to the nature of the settlement, the class of tenure, and the character and circumstances of the holding. Under the Permanent Settlement in Bengal Government derive rather less than £3,000,000 from a total rental estimated at £12,000,000. Under Temporary Settlements, 50 per cent. of the rental in the case of *Zemindari* land may be regarded as virtually a maximum demand. In some parts the impost falls as low as 35 and even 25 per cent. and only rarely is the proportion of one-half the rental exceeded. In regard to *Ryotwari* tracts it is impossible to give any figure that would be generally representative of the Government's share. But one-fifth of the gross produce is the extreme limit, below which the incidence of the revenue charge varies greatly. About sixteen years ago the Government of India were invited in an influential signed memorial to fix one-fifth of the gross produce as the maximum Government demand. In reply to this memorial and other representations the Government of India (Lord Curzon being Viceroy) issued a Resolution in defence of their Land Revenue Policy. In it was stated that "under the existing practice the Government is already taking much less in revenue than it is now invited to exact" and "the average rate is everywhere on the down grade." This Resolution, together with the statements of Provincial Governments on which it was based, was published as a volume; it is still the authoritative exposition of the principles controlling the Land Revenue Policy of the Government of India. In a series of propositions claimed to be established by this Resolution the following points are noted:—(1) In *Zemindari* tracts progressive moderation is the key-note of the Government's policy, and the standard of 50 per cent. of the assets is more often departed from on the side of deficiency than excess; (2) in the same areas the State does not hesitate to interfere by legislation to protect the interests of the tenants against oppression at the hands of the landlords; (3) in *Ryotwari* tracts

the policy of long-term settlements is being extended, and the proceedings in connection with new settlements simplified and cheapened; (4) local-taxation (of land) as a whole is neither immoderate nor burdensome; (5) over-assessment is not, as alleged, a general or widespread source of poverty, and it cannot fairly be regarded as a contributory cause of famine. At the same time the Government laid down as principles for future guidance—(a) large enhancements of revenue, when they occur, to be imposed progressively and gradually, and not *per saltum*; (b) greater elasticity in revenue collection, suspensions and remissions being allowed according to seasonal variations and the circumstances of the people; (c) a more general resort to reduction of assessments in cases of local deterioration.

Protection of the Tenants.

In regard to the second of the five propositions noted above, various Acts have been passed from time to time to protect the interests of tenants against landlords, and also to give greater security to the latter in possession of their holdings. The Oudh Tenancy Act of 1886 placed important checks on enhancement of rent and eviction, and in 1900 an Act was passed enabling a landowner to entail the whole or a portion of his estate, and to place it beyond the danger of alienation by his heirs. The Punjab Land Alienation Act, passed at the instance of Lord Curzon, embodied the principle that it is the duty of a Government which derives such considerable proportion of its revenue from the land, to interfere in the interests of the cultivating classes. This Act greatly restricted the credit of the cultivator by prohibiting the alienation of his land in payment of debt. It had the effect of arresting the process by which the Punjab peasantry were becoming the economic serfs of money-lenders. A good deal of legislation affecting land tenure has been passed from time to time in other provinces, and it has been called for more than once in Bengal, where under the Permanent Settlement (in the words of the Resolution quoted above), "so far from being generously treated by the *Zemindars*, the Bengal cultivator was rack-rented, impoverished, and oppressed."

Government and Cultivator.

While the Government thus interferes between landlord and tenant in the interests of the latter, its own attitude towards the cultivator is one of generosity. Mention has already been made of the great advantage to the agricultural classes generally of the elaborate systems of Land Survey and Records or Rights carried out and maintained by Government. In the Administration Report of Bombay for 1911-12, it is stated:—"The Survey Department has cost the State from first to last many lakhs of rupees. But the outlay has been repaid over and over again. The extensions of cultivation which have occurred (by allowing cultivators to abandon unprofitable lands) have thus been profitable to the State no less than to the individual; whereas under a *Zemindari* or kindred system the State would have gained nothing, however much cultivation had extended throughout

the whole of 30 years' leases." On the other hand, the system is of advantage to the *ryots* in reducing settlement operations to a minimum of time and procedure. In the collection of revenue the Government consistently pursues a generous policy. In times of distress suspensions and remissions are freely granted after proper inquiry.

The amount of gross revenue raised on the land is estimated in 1918-19 at £22,653,100 out of a total from all sources in the same year of £123,190,800. This compares very favourably with the £34,000,000 of land revenue recorded as having been raised annually from a smaller

empire by Aurangzebe.

The literature of the subject is considerable. The following should be consulted by readers who require fuller information:—"Land Revenue Policy of the Indian Government," 1902 (Superintendent of Government Printing); Baden Powell's "Land Systems of British India"; Sir John Strachey's "India, its Administration and Progress, 1911," (Macmillan & Co.); M. Joseph Chailley's "Administrative Problems of British India" (Macmillan & Co., 1910), and the Annual Administration Reports of the respective Provincial Government.

EXCISE.

The Excise revenue in British India is derived from the manufacture and sale of intoxicating liquors, hemp, drugs, toddy and opium. It is a commonplace amongst certain sections of temperance reformers to represent the traffic in intoxicating liquors as one result of British rule. There is, however, abundant evidence to show that in pre-British days the drinking of spirituous liquors was commonly practised and was a source of revenue.

The forms of intoxicating liquor chiefly consumed are country spirit; fermented palm juice; beer made from grain; country brands of rum, brandy, etc., locally manufactured malt beer and imported wine, beer and spirits. Country spirit is the main source of revenue, except in the Madras Presidency, and yields about two-thirds of the total receipts from liquors. It is usually prepared by distillation from the Mhowra flower, molasses and other forms of unrefined sugar, fermented palm juice and rice. In Madras a very large revenue is derived from fresh toddy. The British inherited from the Native Administration either an uncontrolled Out-Still System or in some cases a crude Farming System and the first steps to bring these systems under control were the limitation of the number of shops in the area farmed, and the establishment of an improved Out-Still System under which the combined right of manufacture and sale at a special shop was annually granted. This of course was a kind of control, but it only enabled Government to impose haphazard taxation on the liquor traffic as a whole by means of vend fees. It did not enable Government to graduate the taxation accurately on the still-head duty principle nor to insist upon a standard of purity or a fixed strength of liquor. Moreover for political and other reasons the extent of control could not at first be complete. There were tribes of aborigines who regarded the privilege of making their own liquor in their private homes as a long established right; and who believed that liquor poured as libations to their god should be such as had been made by their own hands. The introduction of any system amongst those peoples had to be worked very cautiously. Gradually, as the Administration began to be consolidated, the numerous native pot-stills scattered all over the country under the crude arrangements then in force began to be collected into Central Government enclosures called Distilleries, thus enabling Government to perfect its control by narrowing the limits of supervision;

and to regularize its taxation by imposing a direct still-head duty on every gallon issued from the Distillery. Under Distillery arrangements it has also been possible to regulate and supervise thoroughly the manufacture of liquor and its disposal subsequent to its leaving the Distillery by means of a system of transport passes, establishment supervision, improved distribution and vend arrangements.

Various Systems.

The Out-Still System may be taken to include all systems prior in order of development to the imposition of Still-head duty. Briefly stated the stages of development have been—First: farms of large tracts; Second: farms of smaller areas; Third: farms of the combined right to manufacture and sell at particular places without any exclusive privilege over a definite area; Fourth: farms of similar right subject to control of means and times for distilling and the like. The Provincial Governments have had to deal with the subject in different ways suited to local conditions, and so the order of development from the lower forms of systems to the higher has not been always everywhere identical in details. Yet in its essence and main features the Excise Administration in most provinces of British India has progressed on uniform lines the key note lying in attempts, where it has not been possible to work with the fixed duty system in its simplest forms, to combine the farming and fixed duty systems with the object of securing that every gallon of spirit should bear a certain amount of taxation. The Out-Still System has in its turn been superseded by either the Free-supply system or the District Monopoly system. The Free-supply system is one of free competition among the licensed distillers in respect of manufacture. The right of vend is separately disposed of. The District monopoly system on the other hand is one in which the combined monopoly of manufacture and sale in a district is leased to a farmer subject to a certain amount of minimum still-head duty revenue in the monopoly area being guaranteed to the State during the term of the lease.

The recommendations of the Indian Excise Committee of 1905-06 resulted in numerous reforms in British India, one of them being that the various systems have been or are gradually being superseded by the Contract Distillery System under which the manufacture

of spirit for supply to a district is disposed of by tender, the rate of still-head duty and the supply price to be charged are fixed in the contract and the right of vend is separately disposed of. This is the system that now prevails over the greater portion of British India. The other significant reforms have been the revision of the Provincial Excise Laws and regulations, and the conditions of manufacture, vend, storage and transport, an improvement in the quality of the spirit, an improved system of disposal of vend licenses, reductions and re-distributions of shops under the guidance and control of local Advisory Committees and gradual enhancement of taxation with a view to checking consumption.

Since the issue of the report of the Excise Committee, 1905-06, no less than 213,000 square miles of territory were transferred from the out-still to the distilling system. In 1905-06 39 per cent. of the total excise area and 28 per cent. of the population of that area were served by out-stills, the proportions in 1912-13 were only 15 and 8 per cent. respectively.

The incidence of the total revenue derived from country distillery spirits per proof gallon during the quinquennium 1908-09 to 1912-13 was as follows:—

1908-09	..	..	Rs.	5.52
1909-10	..	..	..	5.72
1910-11	..	..	..	5.49
1911-12	..	..	..	5.84
1912-13	..	..	..	6.05

The incidence of revenue per proof gallon for the year 1915-16 was Rs. 7.45. It was highest in the Punjab, *viz.*, Rs. 12.52 and lowest in the N. W. Frontier Province, *viz.*, Rs. 2.85.

In the last year the incidence was highest in Berar 7.24 and lowest in Behar and Orissa 3.28. The average consumption of country spirits per 100 of the population in the distillery areas during the above period was as follows:—

1908-09	..	..	Gallons L. P.	4.43
1909-10	..	..	..	4.11
1910-11	..	..	..	4.40
1911-12	..	..	..	4.52
1912-13	..	..	..	4.75

In 1912-13 it was highest in Bombay 15.22 and lowest in Bengal 2.13.

In 1915-16 the average consumption of country spirit per 100 of population was 5.40 gallons L. P. It was highest in the Panjab, *viz.*, 16.96 and lowest in Burmah 768.

SALT.

The salt revenue was inherited by the British Government from Native rule, together with a miscellaneous transit dues. These transit dues were abolished and the salt duty consolidated and raised. There are four great sources of supply; rock salt from the Salt range and Kohat Mines in the Punjab; brine salt from the Sambhar Lake in Rajputana, salt brine condensed on the borders of the lesser Rann of Cutch; and sea salt factories in Bombay, Madras and at the mouth of the Indus.

Sap of the date, palmyra, and coconut palms called toddy, is used as a drink either fresh or after fermentation. In Madras and Bombay the revenue is obtained from a fixed fee on every tree from which it is intended to draw the liquor and from shop license fees. In Bengal and Burma the sale of shop licenses is the sole form of taxation. Country brands of rum, and so-called brandies and whiskies, are distilled from grape juice, etc. The manufacture is carried out in private distilleries in various parts of India. A number of breweries has been established, mostly in the hills, for the manufacture of a light beer for European and Eurasian consumption. The uniform fee of 4 annas 6 pies per gallon is levied all over India at the time of issue.

Foreign liquor is subject to an import duty at the tariff rates, the most important of which is Rs. 11-4-0 per proof gallon on spirit and 4 annas 6 pies per gallon on beer. It can only be sold under a license.

Since the war Brandy and Whisky are manufactured in considerable quantities at Baroda.

The base used is the Mhowra flower. It is drunk in big towns as a substitute for German spirit, and is excised at tariff rates.

DRUGS.—The narcotic products of the hemp plant consumed in India fall under three main categories, namely, ganja or the dry flowering tops of the cultivated female hemp plant charas, or the resinous matter which forms an active drug when collected separately; and bhang, or the dried leaves of the hemp plant whether male or female cultivated or uncultivated. The main features of the existing system are restricted cultivation under supervision, storage in Bonded Warehouses, payment of a quantitative duty before issue, retail sale under licenses and restriction on private possession. Licenses to retail all forms of hemp drugs are usually sold by auction.

OPIMUM.—Opium is consumed in all provinces in India. The drug is commonly taken in the form of pills; but in some places, chiefly on social and ceremonial occasions, it is drunk dissolved in water. Opium smoking also prevails in the City of Bombay and other large towns. The general practice is to sell opium from the Government Treasury, or a Central Warehouse, to licensed vendors. The right of retail to the public is sold by annual auction to one or several sanctioned shops.

The opium revenue in 1919-20 is estimated at £3,056,200, and the Excise revenue at £12,133,300.

The Salt Range mines contains an inexhaustible supply. They are worked in chambers excavated in salt strata, some of which are 250 feet long, 45 feet wide and 200 feet high. The Rajputana supply chiefly comes from the Sambhar Lake where brine is extracted and evaporated by solar heat. In the Rann of Cutch the brine is also evaporated by solar heat and the product is known as Baragara salt. In Bombay and Madras sea water is let into shallow pans on the sea-coast and eva-

porated by solar heat and the product sold throughout India. In Bengal the damp climate together with the large volume of fresh water from the Ganges and the Brahmaputra into the Bay of Bengal render the manufacture of sea salt difficult and the bulk of the supply, both for Bengal and Burma, is imported from Liverpool, Germany, Aden, Bombay and Madras.

Broadly, one-half of the indigenous salt is manufactured by Government Agency, and the remainder under license and excise systems. In the Punjab and Rajputana the salt manufactures are under the control of the Northern India Salt Department, a branch of the Commerce and Industry Department. In Madras and Bombay the manufactures are under the supervision of Local Governments. Special treaties with

Native States permit of the free movement of salt throughout India, except from the Portuguese territories of Goa and Damaun, on the frontiers of which patrol lines are established to prevent the smuggling of salt into British India.

From 1888-1903 the duty on salt was Rs. 2-8 per maund of 82 lbs. In 1903, it was reduced to Rs. 2; in 1905 to Rs. 1-8-0; in 1907 to Re. 1 and in 1916 it was raised to Rs. 1-4-0. The successive reductions in duty have led to a largely increased consumption, the figures rising by 25 per cent. between 1903-1908. To illustrate the growth of consumption, in 1902-03, with a tax of Rs. 2-8-0 per maund, the revenue was £5,586,068, for 1919-20 with a duty of Re. 1-4-0, the estimated revenue is £3,914,300.

CUSTOMS.

The import duties have varied from time to time according to the financial condition of the country. Before the Mutiny they were five per cent.; in the days of financial stringency which followed they were raised to 10 and in some cases 20 per cent. In 1875 they were reduced to five per cent., but the opinions of Free Traders, and the agitation of Lancashire manufacturers who felt the competition of the Indian Mills, induced a movement which led to the abolition of all customs dues in 1882. The continued fall in exchange compelled the Government of India to look for fresh sources of revenue and in 1894 five per cent. duties were re-imposed, yarns and cotton fabrics being excluded. Continued financial stringency brought piece-goods within the scope of the tariff, and after various expedients the demands of Lancashire were satisfied by a general duty of $3\frac{1}{2}$ per cent. on all woven goods—an import duty on goods by sea, an excise duty on goods produced in the country. The products of the hand-looms are excluded. These excise duties are intensely unpopular in India, for reasons set out in the special article dealing with the subject. In 1910-11, in order to meet the deficit threatened by the loss of the revenue on opium exported to China, the silver duty was raised from 5 per cent. to 4d. an ounce, and higher duties levied on petroleum, tobacco, wines, spirits, and beer. These were estimated to produce £1 million annually.

The Customs Schedule was completely recast in the Budget of 1916-17 in order to provide additional revenue to meet the financial disturbance set up by the war. The general import tariff, which had been at the rate of 5 per cent. *ad valorem* since 1894 was raised to $7\frac{1}{2}$ per cent. *ad valorem*, except in the case of sugar; as India is the largest producer of sugar in the world the import duty on this staple was fixed at 10 per cent. There was also a material curtailment of the free list. The principal article of trade which was not touched was cotton manufactures. For the past twenty years the position has been that cotton twists and yarns of all kinds are free of duty while a duty at the rate of $3\frac{1}{2}$ per cent. is imposed on woven goods of all kinds whether imported or manufactured in Indian mills. The Budget left the position as it stood. The Government of India would have

been glad to see the tariff raised to 5 per cent. without any corresponding alteration of the excise, but were over-ruled by the Cabinet on the ground that this controversial matter must come up for discussion after the war. Finally the Budget imposed export duties on tea and jute. In the case of tea the duty was fixed at Re. 1-8-0 per 100 lbs.; in the case of jute the export duty on raw jute was fixed at Rs. 2-4-0 per bale of 400 lbs., approximately equivalent to an *ad valorem* duty of 5 per cent.; manufactured jute was charged at the rate of Rs. 10 per ton on sacking and Rs. 16 per ton on Hessians.

The Customs Tariff was further materially modified in the Budget for 1917-18. In the previous year an export duty on jute was imposed at the rate of Rs. 2-4-0 per bale of 400 lbs. in the case of raw jute and Rs. 10 per ton on sackings, and Rs. 16 per ton on Hessians; these rates were doubled, with a view to obtaining an additional revenue of £500,000. The import duty on cotton goods was raised from $3\frac{1}{2}$ per cent. to $7\frac{1}{2}$ per cent. without any alteration in the Excise, which remained at $3\frac{1}{2}$ per cent. This change was expected to produce an additional revenue of £1,000,000. The question of the Excise was left untouched, for the reason, amongst others, that the Government could not possibly forego the revenue of £320,000, which it was expected to produce. With these changes in operation the revenue from Customs in 1918-19 is estimated at £13,352,400.

The Customs Department is administered by an Imperial Customs Service responsible to the Imperial Government in the Department of Commerce and Industry, but acting through the Local Governments. The senior Collectors are Covenanted Civilians specially chosen for this duty; the subordinates are recruited in India and in England (Customs Tariff q. v.)

Income Tax.

The income tax was first imposed in India in 1860, in order to meet the financial dislocation caused by the Mutiny. It was levied at the rate of four per cent. or a little more than $9\frac{1}{2}$ d. in the pound on all incomes of five hundred rupees and upwards. Many changes have from time to time been made in

the system, and the present schedule was consolidated in the Act of 1886. This imposed a tax on all incomes derived from sources other than agriculture which were exempted. On incomes of 2,000 rupees and upwards it fell at the rate of five pies in the rupee, or about 6½d. in the pound; on incomes between 500 and 2,000 rupees at the rate of four pies in the rupee or about 5d. in the pound. In March 1903 the minimum taxable income was raised from 500 to 1,000 rupees. The income-tax schedule was completely revised, raised, and graduated in the Budget of 1916-17 in the general scale of increased taxation imposed to meet the deficit arising out of war conditions. All existing exemptions were left untouched and no alteration was made in the taxation of persons whose incomes, official or private, were less than Rs. 5,000 per annum. In the case of incomes which exceeded the sum of Rs. 5,000 per annum the tax was enhanced in the following way:—

(1) Incomes from Rs. 5,000 to Rs. 9,999 pay 6 pies in the rupee, or 7½d. per pound.

(2) Incomes from Rs. 10,000 to Rs. 24,999 pay 9 pies in the rupee, or 11½d. in the pound.

(3) Incomes of Rs. 25,000 and upwards pay 1 anna in the rupee, which is equivalent to 1s. 3d. in the pound.

Profits of companies are assessed at the 1 anna rate; but this is subject to abatement or exemption, to individual shareholders who can show that their total income is such as to warrant a lower rate of taxation or none at all. Thus a shareholder whose income is less than

Rs. 1,000 per annum from all sources obtains a refund of the entire tax previously recovered on his dividends; a man whose total income is Rs. 5,000 obtains a refund of the amount recovered in excess of the 6 pie rate; and so on.

In the Budget of 1917-18 the income tax was left untouched; but there was imposed a super-tax.

The super-tax begins in respect of income exceeding Rs. 50,000 and is levied on the following scale:—

For every rupee of the first Rs. 50,000 of the excess, *i.e.*, between Rs. 50,000 and 1 lakh: 1 anna per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 1 and 1½ lakhs: 1½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 1½ and 2 lakhs: 2 annas in the rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, between 2 and 2½ lakhs: 2½ annas per rupee.

For every rupee of the next Rs. 50,000 of the excess, *i.e.*, on everything over 2½ lakhs: 3 annas per rupee.

These rates are, of course, in addition to the standard income tax at the rate of 1 anna in the rupee. The maximum income tax levied on this scale amounted to five shillings in the pound, income tax and super-tax combined.

The total yield of the income tax in the current year is estimated at £13,521,500.

THE DEBT.

On 30th September 1919, the national debt of India was 568 crores. This figure represents less than Rs. 24 per head of India's population; when compared with the public revenues, which in 1918-19 amounted to about 183 crores, constitutes a national indebtedness which, in comparison with the national resources, is very much smaller than that of most other nations. The reason why India is in this favourable position is mainly the care with which, in the long years of peace preceding the great war, her

outlay was restricted to her available means, whereby the accumulation of wasteful and unproductive debt was avoided. At the commencement of the war India found herself in a position when almost the whole of her debt represented productive outlay on railways and irrigation, normally yielding a return considerably in excess of the interest which she had to pay on the amount borrowed, including the interest on the small amount of debt which could be described as unproductive.

Productive Debt.—The following table shows the amount of the national debt of India, both productive and non-productive, from time to time:—

[IN CRORES OF RUPEES.]

	Ordinary Debt.	PRODUCTIVE DEBT.			Total of debt.
		Railways.	Irrigation.	Total.	
On 31st March—					
1893	97·5	136·5	28·9	165·4	262·9
1898	105·0	159·0	32·5	191·5	296·5
1903	88·7	192·1	37·2	229·3	318·0
1908	56·1	266·6	44·8	311·4	367·5
1913	37·5	317·7	56·4	374·1	411·6
1914	19·2	333·0	59·1	392·1	411·3
1915	3·3	349·8	61·6	411·4	414·7
1916	3·0	351·6	63·6	415·2	418·2
1917	10·5	353·6	64·9	418·5	429·0
1918	132·5	358·8	65·9	424·7	557·2
1919	129·9	365·5	66·7	432·2	562·1

On the 31st March 1914, out of a total debt of 411 crores, only 19 crores represented ordinary or unproductive debt. The annual interest on the latter was only a crore, and on the productive debt about 13 crores, so that India's total interest charges then amounted to about 14 crores. On the other hand, railways and irrigation works, which had been financed from the productive debt, yielded in that year a return of nearly 23 crores, which left a margin of 9 crores of clear profit to the country, after meeting the interest charges on the entire debt. Even after the contribution of £100 millions to the cost of the war which India made in 1917, and which added over 30 per cent. to the national debt, the revenue from railways and irrigation amounted in the year 1918-19 to 33 crores, so that the revenue from productive expenditure amounted to 133 per cent. of the total interest charges. Had it not been for India's contribution of 150 crores to the expenses of the war the ordinary debt would have been completely wiped out in 1917, and the amount of the ordinary debt outstanding on 31st March 1919, namely, 129·9 crores was thus actually less than the amount of that contribution.

Financial Strength.—These are not the only facts which show the strength of India's financial position. The interest on her public

debt is not only secured by the revenue from railways and irrigation works which were directly financed by borrowing, but is a charge on the public revenues as a whole. The following table shows the total revenue and expenditure of India (including the revenue and expenditure of the provinces) during the past six years.

IN CRORES OF RUPEES.				
Revenue.			Expenditure.	
1912-13	..	..	130	119
1913-14	..	..	128	125
1914-15	..	..	122	128
1915-16	..	..	127	128
1916-17	..	..	147	132
1917-18	..	..	169	154
1918-19	..	..	183	186

Form of Debt.—The existing rupee loans are of two kinds:—

(1) Those which Government has undertaken not to repay before a certain fixed date, but which are repayable at the option of Government at any time after that date, after giving notice.

(2) Those which Government has undertaken to repay either (a) on a certain fixed date, or (b) not earlier than a certain fixed and not later than another fixed date.

The following are the rupee loans now in existence:—

(a) NON-TERMINABLE LOANS.

1	2	3	4
Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment. (Unless otherwise stated, repayment will be at par.)	Amount outstanding on Sept. 30th, 1919.
			Rs.
1. 3½ per cent. loan of 1842-43..	1st February and 1st August.	Repayable at the option of Government after three months' notice.	20,90,58,000
2. 3½ per cent. loan of 1854-55.	30th June and 31st December.		29,41,74,000
3. 3½ per cent. loan of 1865 ..	1st May and 1st November.		33,95,17,000
4. 3½ per cent. loan of 1879 ..	16th January and 16th July.		3,65,84,000
5. 3 per cent. loan of 1896-97.	30th June and 31st December.		6,65,54,000
6. 3½ per cent. loan of 1900-01..	30th June and 31st December	Repayable not before 30th December 1920, and thereafter at the option of Government after three months' notice.	31,11,43,000
TOTAL ...			1,25,70,30,000

(b) TERMINABLE LOANS.

Name of loan.	Half-yearly date of payment of interest.	Conditions of repayment.	Amount outstanding on Sept. 30th, 1919.
			Rs.
1. 4 per cent. Terminable Loan of 1915-16.	31st May and 30th November.	Repayable not before 30th November 1920 and not later than 30th November 1923.	4,99,86,000
2. 4 per cent. Conversion Loan of 1916-17.	1st April and 1st October.	Repayable not before 1st October 1931 and not later than 1st October 1936.	9,90,07,000
3. 5 per cent. War Loan, 1929-47.	15th February and 15th August.	Repayable not before 15th August 1929 and not later than 15th August 1947.	25,08,02,000
4. 5½ per cent. War Bonds, 1920.*	15th February and 15th August.	Repayable on the 15th August 1920.	19,18,02,000
5. 5½ per cent. War Bonds, 1922.*	15th February and 15th August.	Repayable on the 15th August 1922.	11,32,91,000
6. 5½ per cent. War Bonds, 1921.*†	15th March and 15th September.	Repayable on the 15th September 1921.	24,79,20,000
7. 5½ per cent. War Bonds, 1923.*†	15th March and 15th September.	Repayable on the 15th September 1923.	2,15,22,000
8. 5½ per cent. War Bonds, 1925.*†	15th March and 15th September.	Repayable (at Rs. 103 per cent.) on the 15th September 1925.	4,17,72,000
9. 5½ per cent. War Bonds, 1928.*†	15th March and 15th September.	Repayable (at Rs. 105 per cent.) on the 15th September 1928.	25,18,63,000
10. 5 per cent. Loan, 1945-55.*	15th April and 15th October.	Repayable at par not earlier than 15th October 1945 and not later than 15th October 1955.	21,28,31,000
		TOTAL ..	1,48,07,96,000

N.B. *—The interest on the loans marked* is exempt from income-tax, but not from super-tax.

† These Bonds will be accepted at par during their currency, as the equivalent of cash for the purpose of subscription to any future long term loan, whatever its rate of interest may be.

There are also still in existence a few special loans, such as certain railway loans taken up by three Indian Chiefs, and a special 4 per cent. loan taken up by the Maharaja of Gwalior in 1887.

Sterling Debt.—Besides the rupee loans, the national debt of India consists of some £172 millions of sterling debt. In former years India was obliged to depend to a large extent on her borrowings in London to finance her expenditure on railways and irrigation, and the present sterling debt represents such of those loans as are still outstanding:—

(1) India $3\frac{1}{2}$ per cent. stock, of which the amount outstanding on 30th Sept. 1919 was about £90 millions;

(2) India 3 per cent. stock, of which the amount outstanding on that date was about £65 millions;

(3) India $2\frac{1}{2}$ per cent. stock, of which the amount outstanding on that date was about £11½ millions.

The remainder of the sterling debt is made up of certain railway debenture stocks, of which the amounts in each case are comparatively small, together with so much of India's contribution of £100 millions as has not been liquidated from the proceeds of the War Loans of 1917 and 1918; the amount of sterling debt outstanding on this account on the 30th September 1919 was about £22 millions representing the liability accepted by India for a corresponding amount of British War Loan.

Nature of Securities.—The three main forms in which the rupee debt is held are:—(i) *Stock* or, as it is sometimes called *Book Debt*; (ii) *Bearer Bonds*; (iii) *Promissory Notes*.

(i) When debt is held in the form of *Stock*, the owner is given a certificate to the effect that he has been registered in the books of the Public Debt Office as the proprietor of a certain amount of Government stock. This certificate is known as a *Stock Certificate*, and it is by that name that this form of debt is generally known.

(ii) A *Bearer Bond* certifies that the bearer is entitled to a certain sum of rupees in respect of the loan to which the bond relates.

(iii) A *Promissory Note* contains a promise by the Governor General in Council, on behalf of the Secretary of State for India, to pay a certain person a specified sum either on a specified date or after certain notice (according to

the terms of the particular loan to which the promissory note relates), and to pay interest thereon at a certain rate half-yearly on certain specified dates.

Each of the above three forms of security is convertible by the holder into either of the other two.

Other Government Securities.—*Treasury Bills* and *Post Office Cash Certificates* are also forms of Government securities.

Treasury Bills, when issued, are in respect of temporary borrowing by the Government of India, and usually have a currency of from three to twelve months. They are sold at a discount, and are paid at maturity at their full face value, the difference representing the yield on the investment. The lowest denomination issued is for Rs. 5,000. Their sale and payment at maturity are managed by the Presidency Banks.

Cash Certificates.—*Post Office Cash Certificates* are specially intended to facilitate the investment of small amounts and to encourage saving among people of small incomes. They have a currency of five years, at the expiry of which they will be repaid. The profit to the investor consists in the fact that they are sold for an amount less than the face value, thus, cash certificates of denominations of Rs. 10, Rs. 20, Rs. 50, Rs. 100, and Rs. 500 can at present be obtained on payment of Rs. 7-12, Rs. 15-8, Rs. 38-12, Rs. 77-8 and Rs. 387-8 respectively. The maximum amount for which certificates may be held by any one person is Rs. 10,000 face value. The special attraction of these Cash Certificates is that the investor's money is not necessarily locked up for the full term of five years. He can, if he wishes, obtain payment at any time during the currency of the certificate, and he will then receive an amount which, according to the time he has held the certificate, gradually increases at compound interest from the original purchase price up to the full face value of the certificate at the end of five years. In the case of the Cash Certificates issued in connection with the Indian War Loans, the yield to the investor ranges from 4 per cent. a year, if he presents it for payment after having held it for one year only, to $5\frac{1}{2}$ per cent. a year if he holds it for the full five years. The investor's profit is not subject to income-tax. These certificates are for sale all the year round and can be obtained at any Post Office which does savings bank business, and payment of the amount due can also be obtained at any such office.

AMOUNT of the RUPEE and STERLING DEBT and of the INTEREST thereon; annual INCREASE or REDUCTION of the DEBT; and the PROPORTION of the RUPEE DEBT held in LONDON, from 1820-21 to 1916-17.

	Registered debt in India.	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed +; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
	Rs.	£	Rs.	£	Rs.	£	Rs.
1820-21	27,24,77,630	5,762,888	1,63,15,400	253,247	—26,73,970	—109,268	
1830-31	33,12,96,680	3,750,479	1,74,19,770	98,377	+75,52,710	—45,413	
1840-41	29,47,65,040	1,756,992	1,35,37,050	59,856	+1,15,89,400	—400	
1850-51	45,42,87,500	3,920,592	2,12,39,750	136,482	+1,00,72,750	—100	
1860-61	63,44,58,100	28,496,917	2,88,34,440	1,249,832	—10,05,920	+4,138,000	
1861-62	63,42,08,450	32,116,217	2,88,32,440	1,437,874	—2,49,650	+3,619,300	
1862-63	63,82,11,060	31,860,017	2,89,96,320	1,430,765	+40,02,610	—256,200	
1863-64	63,40,38,320	26,332,517	2,88,06,180	1,209,621	—41,72,740	—5,527,500	
1864-65	63,36,66,840	26,146,017	2,88,00,400	1,233,165	—3,71,480	—186,500	
1865-66	62,38,10,770	26,967,317	2,84,13,900	1,274,230	—98,56,070	+821,300	
1866-67	62,97,84,230	28,559,917	2,87,13,200	1,402,540	+59,73,460	+1,592,600	
1867-68	63,76,50,020	29,718,417	2,91,57,860	1,448,875	+78,65,790	+1,158,500	
1868-69	63,41,06,910	31,218,917	2,89,87,270	1,449,916	—35,43,110	+1,500,500	
1869-70	65,59,34,220	35,217,617	2,98,17,500	1,629,868	+2,18,27,310	+3,998,700	15,38,06,930
1870-71	66,80,96,570	37,627,617	3,01,56,310	1,726,268	+1,21,62,350	+2,410,000	16,24,51,720
1871-72	67,96,89,420	39,012,617	2,99,08,300	1,781,618	+1,15,92,850	+1,35,68,630	17,64,70,910
1872-73	66,45,83,690	39,012,617	2,89,20,500	1,831,467	—1,51,05,730	+1,385,000	13,04,77,110
1873-74	66,41,72,910	41,117,617	2,89,50,060	1,867,121	—4,10,780	+2,105,000	13,27,22,050
1874-75	69,84,99,590	48,597,033	3,03,35,320	2,165,364	+3,43,26,680	+7,479,416	14,05,71,800
1875-76	72,77,29,810	49,797,033	3,15,20,180	2,212,582	+2,92,30,220	+1,200,000	15,45,77,080
1876-77	71,92,31,260	55,397,033	3,10,98,710	2,436,271	—84,98,550	+5,600,000	14,21,01,660
1877-78	74,95,45,200	59,677,033	3,22,68,610	2,607,472	+3,03,13,940	+4,280,000	15,78,70,170
1878-79	78,83,89,260	59,029,117	3,25,77,260	2,581,555	+3,88,44,060	—647,916	17,14,82,760
1879-80	82,87,25,000	68,585,556	3,41,76,560	1,937,886	+4,03,35,830	+9,826,439	20,52,60,670
1880-81	85,95,97,460	71,429,133	3,55,92,730	2,846,478	+3,08,72,370	+2,573,577	20,26,31,450
1881-82	88,65,31,620	68,181,947	3,66,43,280	2,708,198	+2,69,34,160	—3,287,186	22,65,59,550
1882-83	90,68,87,660	68,585,694	3,74,11,490	2,725,748	+2,03,56,040	+443,747	22,58,11,320
1883-84	93,19,13,840	68,108,837	3,84,91,140	2,704,207	+2,50,26,180	+476,857	22,08,75,180

(a) No information.

AMOUNT OF THE RUPEE AND STERLING DEBT—(contd.).

	Registered debt in India	Registered debt in London.	Interest payable.		Amount borrowed and paid off each year (Borrowed + ; paid off—)		Proportion of the registered rupee debt held in London on 31st March.
	Rs.	£.	Rs.	£.	In India.	In England.	Rs.
1884-85	93,18,36,600	69,271,088	3,84,18,550	7,691,828	—77,240	+1,162,251	21,83,98,370
1885-86	92,70,39,820	73,806,621	3,77,38,380	2,833,068	—47,96,780	+4,535,533	20,71,123,580
1886-87	92,65,36,860	84,228,177	3,82,02,570	3,165,411	—5,03,460	+10,421,556	19,14,95,570
1887-88	98,08,98,620	84,140,148	4,03,78,580	2,918,039	+5,43,62,260	—88,029	20,81,88,870
1888-89	1,00,87,97,420	95,033,610	4,13,73,120	3,230,474	+2,78,98,800	+10,893,462	21,71,40,680
1889-90	1,02,76,11,750	98,192,391	4,21,56,080	3,327,348	+1,88,14,330	+3,158,781	21,59,40,490
1890-91	1,02,74,65,550	104,408,208	4,17,51,110	3,524,376	—1,46,200	+6,215,817	26,73,12,950
1891-92	1,02,69,23,170	104,404,143	4,17,15,000	3,602,349	—5,42,380	+2,995,935	27,50,58,410
1892-93	1,02,93,75,520	106,683,767	4,12,77,760	3,570,682	+24,52,350	+720,376	25,93,38,610
1893-94	1,05,54,60,780	114,113,792	4,20,92,060	3,687,986	+2,60,85,260	+743,025	24,16,55,410
1894-95	1,04,37,37,400	116,005,826	3,61,09,140	4,825,323	—1,17,23,380	+1,892,034	23,62,59,660
1895-96	1,03,78,89,280	115,903,732	3,64,00,740	3,607,832	—58,48,120	—102,094	25,35,07,520
1896-97	1,09,11,50,530	114,883,233	3,78,43,760	3,813,208	+5,37,61,250	—1,020,499	24,06,66,620
1897-98	1,11,69,56,340	123,274,680	3,87,11,060	3,940,776	+2,58,05,810	+8,391,447	21,50,87,030
1898-99	1,12,65,46,980	124,268,605	3,91,13,340	3,882,758	+95,90,640	+993,925	21,44,12,330
1899-1900	1,12,47,47,010	124,144,401	3,90,56,310	3,877,026	—17,99,970	—124,204	20,81,88,234
1900-01	1,13,38,19,058	133,435,877	4,00,58,600	4,158,351	+2,85,72,048	+9,290,978	22,18,12,135
1901-02	1,16,19,13,883	134,307,090	4,03,60,615	4,213,821	+85,94,775	+871,711	20,36,22,034
1902-03	1,17,55,40,660	133,796,261	4,08,37,864	4,213,537	+1,86,26,827	+510,829	18,63,35,034
1903-04	1,19,42,43,035	133,045,844	4,14,90,065	4,238,273	+1,87,02,375	+750,417	17,13,92,234
1904-05	1,22,29,78,235	132,887,191	4,24,92,526	4,282,744	+2,87,35,200	—158,653	16,81,55,234
1905-06	1,26,08,10,618	146,457,439	4,38,10,365	4,715,233	+3,78,32,383	+13,570,248	16,43,82,933
1906-07	1,30,45,50,655	147,518,634	4,53,38,937	4,743,108	+4,37,40,037	+1,061,195	16,49,16,833
1907-08	1,32,82,94,955	156,481,074	4,61,66,110	5,053,632	+2,37,44,300	+8,962,440	16,23,21,733
1908-09	1,34,56,60,505	160,973,369	4,68,19,197	5,210,695	+1,73,65,550	+4,492,295	14,43,66,433
1909-10	1,36,84,33,105	170,105,911	4,76,47,428	5,530,758	+2,27,72,600	+9,132,542	15,21,19,933
1910-11	1,38,09,72,155	177,998,335	4,81,24,302	5,668,417	+1,25,39,050	+7,892,434	12,78,49,733
1911-12	1,39,96,36,205	178,486,597	4,87,76,458	5,705,597	+1,86,64,050	+4,88,262	11,73,03,533
1912-13	1,42,38,64,790	179,179,193	4,97,78,481	5,749,887	+2,78,28,585	+692,596	11,20,29,433
1913-14	1,46,08,55,790	177,064,757	5,07,80,519	5,693,919	+2,84,91,000	—2,114,436	10,08,74,333
1914-15	1,50,52,65,200	176,190,358	5,25,30,534	5,682,898	+4,84,09,410	+874,399	9,72,99,850
1915-16	1,55,45,97,700	175,171,829	5,45,29,991	5,665,349	+4,83,32,500	—1,018,529	8,82,51,650
1916-17	1,67,77,70,328	174,144,724	6,01,27,929	5,647,491	+12,81,72,628	+1,027,105	8,30,41,600

INDIAN DEBT IN ENGLAND.

RETURN of all LOANS raised in *England*, under the Provisions of any Acts of Parliament, chargeable on the REVENUES of *India*, outstanding at the Commencement of the Half-year ended on the 30th September 1919.

DESCRIPTION OF LOAN.	Total Amount of Interest payable thereon during the Half-year ended 30th Sept. 1919.	DATE OF TERMINATION OF LOAN.	Amount of Debt paid off or discharged during the Half-year ended 30th Sept. 1919.	Amount of Debt outstanding on 30th Sept. 1919.
£	£	£	£	£
LOANS BEARING INTEREST.				
India 3½ per cent. Stock	1,576,738	Not redeemable until 5th January 1931, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	250,093	89,915,206
India 3 per cent. Stock	976,638	Not redeemable until 5th October 1948, but on or after that day upon one year's previous notice having been given by the Secretary of State for India in Council ..	.....	65,109,189
India 2½ per cent. Stock	146,062	Not redeemable until 5th October 1926, but on or after that day, upon one year's previous notice having been given by the Secretary of State for India in Council ..	.....	11,684,987
East Indian Railway Debenture Stock 4½ per cent.	32,302	.....	.....	1,455,650
Eastern Bengal Railway Debenture Stock 4 per cent.	6,973	.....	.....	348,666
South Indian Railway Debenture Stock 4½ per cent.	9,562	.....	.....	425,000
Great Indian Peninsula Railway Debenture Stock 4 per cent. ..	54,029	.....	.....	2,701,450
LOANS NOT BEARING INTEREST.				
India 5 per cent. Stock .. ..	.....	Total Debt in England bearing Interest..	250,093	171,620,148
India 4 per cent. Stock .. ..	.....	5th July 1880 .. ..	.....	9,305
		10th October 1888 .. ..	.....	5,616
		Total Debt in England not bearing Interest..	.....	14,921
	2,802,304	Total Debt in England	250,093	171,635,069

INTEREST EXPENDITURE.

—	1916-1917.	1917-1918.	1918-1919.	Budget. 1919-1920.
			Revised.	
INTEREST ON DEBT OTHER THAN THAT CHARGED TO RAILWAYS AND IRRIGATION WORKS—				
Interest on total Debt—				
1. India { R .	5,66,67,195	9,34,66,320	12,40,00,500	13,38,00,000
£ .	3,777,813	6,231,088	8,266,700	8,920,000
2. England £ ..	5,846,832	9,938,905	8,400,600	7,819,900
Total ..	9,624,645	16,169,993	16,667,300	16,739,900
Deduct—Amount charged to—				
(a) Railways :				
(i) India { R .	6,20,88,181	6,75,37,920	6,97,61,000	7,28,85,000
£ ..	4,139,212	4,502,528	4,650,800	4,859,000
(ii) England £ ..	3,620,110	3,652,953	3,636,600	3,699,600
Total Railways .. £ ..	7,759,322	8,155,481	8,287,400	8,558,600
(b) Irrigation :				
(i) India { R .	1,93,89,288	2,08,67,700	2,12,36,000	2,15,87,000
£ ..	1,292,620	1,391,180	1,415,700	1,439,100
(ii) England £ ..	120,585	124,415	124,500	124,600
Total Irrigation . £ ..	1,413,205	1,515,595	1,540,200	1,563,700
Total deduction . £ ..	9,172,527	8,671,076	9,827,600	10,122,300
Interest on Ordinary Debt .. £ ..	452,118	6,498,917	6,839,700	6,617,600
Distribution of above—				
Imperial £ ..	229,306	6,289,001	6,590,800	6,301,100
Provincial £ ..	222,812	211,916	248,900	316,500
INTEREST ON OTHER OBLIGATIONS—				
On Savings Bank Balances converted at R15=£1 £ ..	513,795	631,034	791,600	852,200
Other items £ ..	208,951	198,218	235,300	293,700
Total	722,746	829,252	1,026,900	1,145,900
GRAND TOTAL ..	1,174,864	7,328,169	7,866,600	7,763,500

INTEREST EXPENDITURE—*contd.*

	1916-1917.	1917-1918.	1918-1919. Revised.	Budget, 1919-1920.
Debt outstanding on 31st March—	£	£	£	£
Sterling	174,144,724	236,957,575	203,042,575	194,142,575
Rupee Debt—	Rs.	Rs.	Rs.	Rs.
New Loan .. .. .	....	....	....	15,00,00,000
5½ per cent.	4,91,67,253	31,74,74,065	88,75,59,085	88,76,89,065
5 per cent.	1,10,51,523	25,17,53,643	25,13,12,643	24,69,12,643
4 per cent.	21,46,54,000	17,68,18,200	17,48,89,200	17,36,89,200
3½ per cent.	1,32,02,13,950	1,19,38,73,900	1,19,00,77,900	1,19,06,77,900
3 per cent.	7,26,69,400	6,83,29,150	6,69,00,150	6,62,00,150
Treasury Bills .. .. .	....	43,57,05,000	43,57,05,000	21,07,05,000
Temporary loans	50,00,000	4,00,00,000	....	....
Other Debt.. .. .	1,00,14,200	1,00,13,900	1,00,13,900	1,00,13,900
Savings Bank Balances	25,25,68,358	30,70,05,385	38,18,57,385	42,80,49,385
Post Office Cash Certificates. ....	....	8,88,44,541	8,26,44,541	8,26,44,541

The charges for the service of India's contribution to the war will be applied as follows:—

	1918-1919 Revised.	Budget. 1919-20.
In India—	£	£
Interest and miscellaneous charges for Indian war loan, 1917.. .. .	1,582,000	1,551,000
Depreciation fund for long term Indian war loan (1929-47) at 1½ per cent. on the amount of loan created by fresh issue and conversion.. .. .	273,300	273,300
Interest on Second Indian war loan, 1918	1,086,700	2,092,200
Total	2,922,000	3,916,500
In England—		
Interest on British 5 per cent. war loan (1929-47) taken over by India	2,682,700	1,498,300
Sinking fund in respect of British 5 per cent. war loan (1929-47) taken over by India .. .. .	....	633,700
Total	5,604,700	6,048,500

THE INDIAN MINTS.

The quantity of **silver coinage** carried out at the Mints during the year 1918-19, constitutes a new record, the total nominal value of the Government of India coinage alone being Rs. 52,05,35,309 as compared with Rs. 30,77,07,326, the corresponding figure for 1916-17, which had hitherto been the heaviest coinage recorded. The details of the silver coinage executed at the two mints for the Government of India during 1918-19 are given in the statement below:—

				CALCUTTA.	BOMBAY.	TOTAL.
				Value in Rupees.	Value in Rupees.	Value in Rupees.
Rupees	..	..	..	26,04,00,000	24,06,06,326	50,10,06,326
Half-rupees	..	..	..	17,22,876	51,62,333	68,85,209
Quarter-rupees	..	..	..	1,26,43,774	....	1,26,43,774
TOTAL				27,47,66,650	24,57,68,659	52,05,35,309
TOTAL for 1917-1918				9,91,62,854	13,95,44,433	23,87,07,287

Uncurrent coins of the nominal value of Rs. 55,43,733 were received at the two Mints for recoinage during the year. Apart from those, the coinage was from purchased silver, a considerable portion of which consisted of

American dollars and other silver made over by the United States under the Pittman Act. The demand for fractional silver increased largely and the coinage of half and quarter rupees during the year was exceptionally heavy.

In addition the following **subsidiary silver coinage** was executed at the Bombay Mint during the year on behalf of other Governments:—

Denomination of coin.	Tale.	Outturn Value in standard tolas.	Government on whose behalf the coinage was exe- cuted.
Straits 10 cents	8,700,284	8,77,700	} Straits Govern- ment.
Straits 5 cents	3,210,329	1,60,894	
Egyptian ten piastres	90,001	98,168	} Egyptian Gov- ernment.
Egyptian five piastres	180,007	98,190	
Egyptian two piastres	1,600,036	3,49,363	

Nickel one anna pieces of the nominal value of Rs. 50,43,279 were coined at the Bombay Mint against Rs. 36,29,167 worth minted in the previous year. Of the new nickel two-anna coins as many as 85,990,658 pieces of the nominal value of Rs. 1,07,48,832, were turned out at the two Mints as compared with Rs. 36,75,945 the value of nickel and silver coins of the same denomination coined during the previous year. In addition to these, 872,069 nickel five millieme pieces valued at Rs. 67,040 were struck at the Bombay Mint on behalf of the Egyptian Government.

The **bronze coinage** was as usual carried out entirely at the Calcutta Mint and consisted of pice, half pice and pie-pieces of the aggregate value of Rs. 20,10,600 as compared with Rs. 16,03,600 in 1917-18. The Calcutta Mint

also coined Rs. 52,500 worth of copper cents for the Straits Government and Rs. 1,20,450 worth of bronze pennies and half pennies for the Australian Commonwealth.

The **Indian denominations** with their British equivalents are:—

Pie	= 1/12 penny.
Pice (3 pies)	= 1 farthing.
Anna (12 pices)	= 1 penny.
Rupee (16 annas)	= 1s. 4d.

A lakh (lac) is 100,000 rupees and a crore is 100 lakhs.

The denominations of currency notes in circulation are 1, 2½, 5, 10, 50, 100, 500, 1,000, and 10,000 rupees.

HISTORY OF THE COINAGE.

The Indian mints were closed to the unrestricted coinage of silver for the public from the 26th June 1893, and Act VIII of 1893, passed on that date, repealed Sections 19 to 26 of the Indian Coinage Act of 1870, which provided for the coinage at the mints for the public of gold and silver coins of the Government of India. After 1893 no Government rupees were coined until 1897, when, under arrangements made with the Native States of Bhopal and Kashmir, the currency of those States was replaced by Gov-

ernment rupees. The re-coinage of these rupees proceeded through the two years 1897 and 1898. In 1899 there was no coinage of rupees; but in the following year it seemed that coinage was necessary, and it was begun in February 1900, the Government purchasing the silver required, and paying for it mainly with the gold accumulated in the Paper Currency Reserve. In that and the following month a crore of rupees was coined and over 17 crores of rupees in the year ending the 31st March 1910

including the rupees issued in connection with the conversion of the currencies of Native States. From the profit accruing to Government on the coinage it was decided to constitute a separate fund called the Gold Reserve Fund as the most effective guarantee against temporary fluctuations of exchange. The whole profit was invested in sterling securities, the interest from which was added to the fund. In 1906 exchange had been practically stable for eight years, and it was decided that of the coinage profits devoted to this fund, six crores should be kept in rupees in India, instead of being invested in gold securities. The Gold Reserve Fund was then named the Gold Standard Reserve. It was ordered in 1907 that only one-half of the coinage profits should be paid into the reserve, the remainder being used for capital expenditure on railways. The Gold Standard Reserve was called into action before the year 1907-08 was out. Exchange turned against India, and in March 1908, the Government of India offered bills on the Secretary of State up to half a million sterling, while the Secretary of State sold £1,000,000 Consols in order to meet such demands. During April to August, further sterling bills were sold for a total amount of £8,053,000. On a representation by the Government of India, the Secretary of State agreed to defer the application of coinage profits to railway construction until the sterling assets of the Gold Standard Reserve amounted to £25,000,000. On the outbreak of the war in August 1914 the Reserve was drawn upon to meet the demands for sterling remittances, and Government offer to sell £1,000,000 of Bills weekly. The extent of these rates is shown on pp. 191, 192.

Gold.

Since 1870 there had been no coinage of double mohurs in India and the last coinage of single mohurs before 1918, in which year coinage was resumed, was in the year 1891-92.

A Royal proclamation was issued in 1918 establishing a branch of the **Royal Mint at Bombay**. It stated:—Subject to the provision of this proclamation the Bombay Branch Mint shall for the purpose of the coinage of gold coins be deemed to be part of the Mint, and accordingly, (a) the Deputy Master of the Bombay Branch Mint shall comply with all directions he may receive from the Master of the Mint whether as regards the expenditure to be incurred or the returns to be made or the transmission of specimen coins to England or otherwise and (b) the said specimen coins shall be subject to the trial of the pyx under section 12 of the Coinage Act, 1870, so that they shall be examined separately from the coins coined in England or at any other branch of the Mint, and (c) the Deputy Master of the Bombay Branch Mint and other officers and persons employed for the purpose of carrying on the business of the Branch Mint may be appointed, promoted, suspended and removed and their duties assigned and salaries awarded and in accordance with the provisions of section 15 of the Coinage Act, 1870. Pending the completion of the arrangements at the Branch Royal Mint, power was taken by legislation to coin in India gold mohurs of the same weight and fineness as the sovereign. Altogether 2,109,703 pieces of these

new coins of the nominal value of Rs. 3,16,45,545, were struck at the Bombay Mint. The actual coinage of sovereigns was begun in August, 1918, and 1,295,372 sovereigns were coined during the year.

Act XXII of 1899, passed on the 15th September 1899, provided that gold coin (sovereign and half-sovereigns) shall be a legal tender in payment or on account at the rate of fifteen rupees for one sovereign.

Silver.

The weight and fineness of the silver coins are:—

—	FINE SILVER. grains.	ALLOY. grains.	TOTAL. grains.
Rupee	165	15	180
Half-rupee	82½	7½	90
Quarter-rupee or 4-anna piece	41¼	3¾	45
Eighth of a rupee or 2 anna piece	20½	1¾	22½

One rupee = 165 grains of fine silver.

One shilling = 80½ grains of fine silver.

One rupee = shillings 2·0439.

Copper and Bronze.

Copper coinage was introduced into the Bengal Presidency by Act XVII of 1835, and into the Madras and Bombay Presidencies by Act XXII of 1844.

The weight of the copper coins struck under Act XXIII of 1870 remained the same as it was in 1835. It was as follows:—

	Grains troy.
Double pice, or half-anna	200
Pice or quarter-anna	100
Half-pice or one-eighth of an anna	50
Pie, being one-third of a pice or one-twelfth of an anna	33½

The weight and dimensions of bronze coins are as follows:—

	Standard weight in grains troy.	Diameter in millimetres.
Pice	75	25·4
Half-pice	37½	21·15
Pie	25	17·45

Nickel.

The Act of 1906 also provides for the coinage of a nickel coin. It was directed that the nickel one-anna piece should thenceforth be coined at the Mint and issue. The notification also prescribed the design of the coin, which has a waved edge with twelve scollops, the greatest diameter of the coin being 21 millimetres, and its least diameter 19·8 millimetres. The desirability of issuing a half anna nickel coin was considered by the Government of India in 1909, but after consultation with Local Governments it was decided not to take action in this direction until the people had become thoroughly familiar with the present one-anna coin. The two-anna nickel coin was introduced in 1917-18.

The Paper Currency.

Under Acts VI of 1839, III of 1840, and IX of 1843, the Presidency Banks of Bengal, Bombay, and Madras were authorised to issue notes payable on demand, but the issue of the notes was practically limited to the three cities of Calcutta, Bombay, and Madras. These Acts were repealed, on the 1st March 1862, by Act XIX of 1861, providing for the issue of a paper currency through a Government Department, by means of notes of the Government of India payable to bearer on demand. Since then no banks have been allowed to issue notes in India.

Act II of 1910 amended and consolidated the law on the subject. By it, a note of the value of five, ten, or fifty rupees, as well as a note of any other denominational value which the Governor General in Council may, by notification in the *Gazette of India*, so specify, was declared to be a "universal currency note," that is, legal tender throughout British India and encashable at any office of issue in British India; the then existing sub-circles of Cawnpore, Lahore, Karachi, and Calicut were abolished, and the first three of these constituted separate circles of issue in addition to Calcutta, Madras, Bombay, and Rangoon. At the same time, by a notification issued under the Act, the further issue of 20-rupee notes was discontinued. By another notification issued in 1911 under section 2 of the same Act a currency note of the denominational value of one hundred rupees was declared to be a "universal currency note."

Department of Paper Currency.

The function of this department is to issue, without any limits, promissory notes (called currency notes) of the Government of India payable to the bearer on demand, of the denominations of Rs. 1, 2/8, 5, 10, 50, 100, 500, 1,000 and 10,000, the issue being made in exchange for rupees or half rupees or for gold coin, which is legal tender, from any Paper Currency office or agency, and for gold bullion and gold coin, which is not legal tender, from circle offices on the requisition of the Comptroller General.

Supply and issue of Currency Notes.

Currency notes are supplied by the Secretary of State through the Bank of England on an indent from the Head Commissioner. The Head Commissioner or Commissioners supply Currency Agents with all the notes required for the purposes of the Paper Currency Act. Every such note, other than a "universal" note, bears upon it the name of the place from which it is issued and every note is impressed with the signature of the Head Commissioner or of a Commissioner or Deputy Commissioner.

The officers in charge of the circles of issue are authorised to issue, from the office or offices established in their circles, currency notes in exchange for the amount thereof (1) in rupees or half-rupees or in gold coin which is legal tender under the Indian Coinage Act; or in rupees made under the Native Coinage Act, IX of 1876, and (2) on the requisition of the Comptroller General, to all treasuries, in gold coin which is not legal tender under the Coinage Act or gold bullion at the rate of one Government rupee for 7-53344 grains troy of fine gold. Currency

notes can also be issued against gold coin of bullion or silver bullion or sterling securities held by the Secretary of State for India in Council.

Notes when legal tender.

Every note is a legal tender in its own circle (except by Government at the office of issue) for the amount expressed in that note; that is to say, whenever a note forms the integral sum or a portion of any payment, either to Government on account of a revenue or other claim, or to any body corporate or person in British India, it is a legal-tender. Five, ten, fifty and hundred rupee notes are legal tender throughout British India.

Notes of higher denominations than five, ten, fifty and hundred rupees are payable only at the office or offices of issue of the town from which they have been issued. In ordinary circumstances every Government treasury, of which there are about 250 in British India, cashes or exchanges notes if it can do so without inconvenience; and when this cannot be done conveniently for large sums, small sums can generally be exchanged for travellers.

The whole amount of currency notes in circulation is secured by a reserve of gold and silver coin or bullion and securities of the Government of India or of the United Kingdom.

The Currency and the War.

The main features of the Indian currency situation during the years of war have been indicated in previous issues of *The Indian Year Book*. All that remains here is to summarise them and indicate so far as is possible the actual present position. It was always anticipated that in time of crisis the chief difficulty which the Government of India would have to meet would be a demand for sterling remittance. This was so far justified that on the outbreak of hostilities there was a demand for Sterling Bills on London, which were issued after brief delay. There was also a rush on the Currency offices for the encashment of Notes, which was soon stemmed, and a heavy withdrawal of deposits from the Post Office Savings Banks. These disturbances were temporary and India recovered from the shock of war with surprising rapidity. Thereafter the chief difficulty which had to be faced in India was not a demand for Sterling Remittance, but for Rupee Remittance and silver coin. The causes underlying this unexpected demand may be briefly indicated. They were a large balance of trade in favour of India, arising from the demand for Indian products and small shipments of manufactured goods from the United Kingdom and the Allied States; a very heavy expenditure in India on behalf of the United Kingdom for war material and services, which were financed by Notes in India secured against British Treasury Bills; and the establishment of an embargo on the free movement of the precious metals to India, amounting in the case of gold to virtual prohibition. The result was an insatiable demand for silver coin as the only means of satisfying the hereditary demand of the Indian for some form of bullion in which to invest his savings. The demand for rupees was so prodigious that the ordinary

silver supplies could not satisfy it; after the country had been brought to the verge of inconvertibility large supplies were received from the United States through the surrender of a considerable amount of the dollar reserve. Moreover the Indian demand for silver, coupled with a larger demand from all other countries, induced a rapid rise in the price of the metal. Before the war the price of silver was approximately 26d. an ounce; under the stimulus of war conditions it rose to 78d. an ounce. The Indian exchanges rose in response, and from one and fourpence, the goal of Indian currency policy since 1893, the rupee rose by successive stages to two shillings and five pence. There was an insistent demand that these vexed questions should be subjected to an authoritative examination, with a view to re-establishing if possible fixity of exchange, and for this purpose a committee was appointed. It sat in London throughout the greater part of 1919 and reported at the end of the year, and the report is summarised elsewhere.

THE CURRENCY COMMITTEE:—The personnel of the Committee is:—

Sir Henry Babington Smith (Chairman), Lord Chalmers, Sir Marshall F. Reid, Sir James B. Brunyate, Mr. F. C. Goodenough, Sir C. Addis, Sir C. Needham, Mr. M. M. Gubbay (Controller of Currency, representing the Government of India), Sir Bernard Hunter, Mr. Dadiba Merwanji Dalal (Bombay), and Mr. Thomas McMorran (Messrs. Duncan Brothers, Calcutta).

The terms of reference are as follows:—

“To examine the effect of the war on the Indian exchange and currency system and practice, and upon the position of the Indian note issue, and to consider whether, in the light of this experience and of possible future variations in the price of silver, modifications of system or practice may be required; to make recommendations as to such modifications, and generally as to the policy that should be pursued with a view to meeting the requirements of

trade, to maintaining a satisfactory monetary circulation, and to ensuring a stable gold exchange standard.”

The Currency Problem.

The best statement of the Indian Currency problem is contained in an able minute submitted to the Currency Committee by the Calcutta Chamber of Commerce which set out the position as it existed in May 1919. The subsequent developments were a further large increase in the Paper Currency and a rise in Exchange to 2s. 5d. The main features of this memorandum are reproduced below:—

I—EFFECTS OF THE WAR:—(a) On Exchange.—The visible effect has been a rise in the exchange value of the rupee from 1/4d. to 1/8d., accompanied during the past two years by a reluctance on the part of the Exchange Banks to purchase bills unless the seller of the bills is able to provide, or to earmark, sufficient remittances to balance the purchase. In fact practically throughout this period natural causes have operated which, in the absence of restrictions, would have brought about a still greater rise.

(b) On Note Issue.—The active note circulation has risen from 49·97 crores on 31st March 1914 to 133·59 crores on 31st March 1919. The gross circulation of one rupee notes, which were first issued in December 1917, increased from 32½ lakhs on 31st March 1918 to 1,051½ lakhs on 31st March 1919.

(c) On Metallic Currency.—The absorption of silver coin (rupees and half rupees) during the five years 1914-19 has been 110·39 crores, as compared with 43·91 crores during the five years 1909-14. The absorption of small coin of 4 annas and less has risen from 56 lakhs in 1913-14 to 99 lakhs in 1917-18 and 277 lakhs in 1918-19.

(d) On Treasury Balances and Reserves.—The following is a comparison of the Treasury Balances and the several Reserves held in London on 31st March 1915 and 31st March 1919, the figures for the latter year being provisional.

	At 31st March 1915.	At 31st March 1919.
	£	£
Treasury	7,904,914	8,715,046
Paper Currency Reserve—Securities ..	2,666,666	54,998,953
Gold	5,100,000	82,391
Gold Standard Reserve—Securities ..	13,168,219	29,848,332
Gold	1,258,322	....
Short Loans .. .. .	....	6,015,672
Special Reserve .. .. .	....	6,939,612
TOTAL ..	£30,098,121	£106,600,006

Thus India is holding in England balances enormously in excess of her needs.

II—REASONS FOR THE ABOVE CHANGES:—

(a) As regards Exchange.—

(1) *Balance of Trade.*—If we examine the figures of import and export of merchandise for the five pre-war years 1909-1914, and compare these with the corresponding figures for the war years 1914-1919 we find that the excess of exports

in the former case was 391 crores, and in the latter 381 crores, there being thus practically no difference between the two periods. These excesses are in normal times balanced chiefly by imports of gold and silver, by Council Bills and by private remittances.

(2) *Gold and Silver.*—India's private imports of gold have been on a steadily increasing scale, and in 1911-1912 the net imports reached a total of nearly 38 crores.

For the five years 1909-1914 her private net imports of gold amounted to no less than 144 crores, and of silver to 36 crores. Her total private net imports of the precious metals during these years thus amounted to 180 crores as against 55 crores during the following quinquennial period.

As a result of the war, India's imports of gold were almost entirely cut off, owing to the refusal of the gold standard nations to part with their supplies. The imports of gold consequently fell to 39 crores for the 5 years 1914-1919, of which 18 crores were acquired by Government, leaving only 21 crores for private needs, and reducing the yearly average supply to a figure below that of any of the preceding 25 years except famine years.

Unable to obtain gold, India turned to silver, the demand for which became almost insatiable, and in the three years, 1916-1919, she absorbed no less than 107 crores of rupees, an average of 36 crores yearly of a weight of 123 million ounces of fine silver, or considerably more than half of the maximum annual production of the world, which has now been reduced owing to internal trouble in Mexico and the increased cost of production in other parts of the world. At the same time the demand for silver for

coinage purposes increased all over the world, all influences combined resulting in an increase of price from 24*d.* in August 1914 to 55*d.* in September 1917. The price then fell to 41½*d.* in October 1917, and remained between that figure and 50*d.* till May 1919, arrangements having been made by the United States Government to supply India with silver from their currency reserve. The exchange value of the rupee had meantime been raised to 1/6*d.* in April 1918, but in May 1919 owing to the withdrawal for the prohibition of export from the United States the price of silver rose suddenly, and as a result it has since been necessary for the Secretary of State to raise his price for Councils to 1/8*d.*

Thus although the visible cause of the rise in exchange is the rise in the price of silver, the main cause is without doubt the refusal of the Gold Standard purchasers of India's produce to pay for this produce in gold, thus compelling the Government of India to import silver in order to meet trade requirements. Nor can it be said that India's demands on this score were unreasonable, for her absorption of the precious metals including gold and silver bullion and coin and rupees, was 224 crores in the years 1909-14 and only 165 crores in the years 1914-19. The following table shows the figures:—

....	Net private imports of gold. crores.	Net private imports of silver. crores.	Total of 1 & 2. crores.	Absorption of rupees. crores.	Total absorption of the precious metals. crores.
1909—14	144	36	180	44	224
1914—19	39	16	55	110	165

(3) *Councils.*—The actual amount of Councils less Reverse Councils available for trade purposes in the five years 1909-14 was £137 million, and in 1914-19 £103 million to which must be added £27 million American credits. Therefore the favourable balance of trade brought about by the impossibility of gold importation has not been corrected by sales of Councils.

(4) *Private remittances.*—In normal years a very large proportion of the profits of British merchants is remitted to England, thus indeed lessening the favourable balance of trade. Whether this has occurred to a normal extent during the five years is open to doubt. Very large profits have been made, and it would appear from the large balances held by successful manufacturing concerns, and from the large sums invested in War Loans and Treasury Bills, that the difficulty of bringing funds from England to India and the high British income tax have encouraged investors in Great Britain to leave their money in India, thus reducing this invisible factor in the reduction of the balance of trade. This point was clearly recognised by Sir James Meston in his introduction to the Financial Statement of 1919-20.

(b) *NOTE ISSUE AND CURRENCY.*—(1) *War Payments.*—The net war transactions by the Indian Government on behalf of the British

Government amounting during the years of war to about £200 million, have ultimately largely been made in notes.

(2) *Prohibited Transport of silver.*—It is probable that the prohibition of the transport of silver by rail has forced payment to be made by notes instead of by rupees. As an instance of this may be given the comparative figures of the notes and rupees remitted by the Bank of Bengal to the jute centres of Dacca, Narain-gunge and Chandpur for the busy season August to October 1913 and 1918—

	Rupees.	Notes.	Total.
1913 ..	6,78,51,000	2,00,000	6,80,51,000
1918 ..	51,70,000	5,66,70,000	6,18,40,000

A further example may be given in the receipts of one of the largest Calcutta exchange banks for the month of March 1914 as compared with March 1919. In 1914 the percentage of notes to total receipts of notes and silver was 86·7 and of silver 13·3; in 1919, the figure for notes was 96·27 and for silver 3·73.

(3) *Disappearance of Rupees.*—It is also probable that Gresham's law has operated in up-country districts, where notes have been at a discount, and the disappearance from circulation of the more valuable silver currency.

has resulted. As a medium of currency, gold has long disappeared.

(4) *Growth of trade.*—It has been estimated that the increase in active circulation of notes and rupees as between the periods 1900-04 and 1914-18 was 71 per cent. For the same periods the growth in the value of external trade was 83 per cent, and to this growth in external trade must be added the great increase in internal movement of such commodities as iron and steel, coal and oil. Figures for 1918-19 are not yet available, but it would appear from the above that the growth of the circulation of currency has, up to 1918, hardly kept pace with the growth in the volume of trade.

(c) AS REGARDS METALLIC COINS—(1) *Difficulty of obtaining gold and silver bullion.*—Without doubt this has been the chief cause of the enormous demand for rupees. The price of a sovereign in Bombay on 19th June 1919 was Rs. 21, whereas for imported sovereigns the Indian Government will only pay Rs. 12-4-6; silver bullion has been scarce, and is somewhat dearer than the rupee. Rupees have therefore been demanded, not only for currency, but for melting and the provision of ornaments.

(2) *Reluctance to buy imports at high prices* has also probably been a contributory cause, and has led to the excess hoarding of rupees, the only form of precious metal obtainable.

(3) *Preference for coin in any form to notes* has led to a great increase in the absorption of smaller silver, nickel and bronze coins.

(d) AS REGARDS TREASURY BALANCES AND RESERVES.—(1) *Heavy transactions in India on account of the Home Government.*—

(2) *Lesser payments in the United Kingdom on account of the Indian Government.*—These two causes combined have, in spite of India's contribution to the war, totalling up to 31st March 1919 about £68 millions, brought

about a transfer of funds from India to England of £76 millions as between 1915 and 1919. They are fully explained in the Statements of the Finance Ministers for 1918-19 and 1919-20.

The Note Circulation.

The following table illustrates the increase in the Note circulation as compared with previous years:—

(In lakhs of rupees.)

YEAR.	CIRCULATION ON 31ST MARCH.			Increase in average active circulation.
	Gross.	Net	Active	
1899-1900 ..	28,74	27,04	22,10	
1904-05 ..	39,18	36,30	28,46	+6,84
1909-10 ..	54,41	49,10	39,98	+9,10
1910-11 ..	54,99	48,41	40,17	+1,54
1911-12 ..	61,36	56,17	44,61	+3,14
1912-13 ..	68,98	56,20	47,92	+3,50
1913-14 ..	66,12	58,72	49,97	+1,24
1914-15 ..	61,63	55,65	43,96	—1,20
1915-16 ..	67,73	64,13	53,19	+2,65
1916-17 ..	86,37	81,98	67,08	+11,28
1917-18 ..	99,70	97,78	84,39	+12,51

THE GOLD STANDARD RESERVE.

The Gold Reserve Fund was first started in the beginning of 1901 when the profits which had accrued from the coinage of rupees from April 1900 amounting to £3 millions were credited to the fund, gradually remitted to England from time to time and there invested in sterling securities. In the following years the demand for rupees for trade requirements necessitated further heavy coinage and the investments held in the Gold Reserve Fund rapidly swelled by the credit of the profits and the interest thereon. The effects of the war have been temporarily to reduce the importance of the Gold Standard Reserve. It is a reserve from which to meet the demand for Sterling Remittance, in the event of the balance of trade turning against India, and the expenses of the Government of India in London in the event of there being no demand for Council Bills. But as has been shown in the article on the Paper Currency Reserve above, the chief feature of the finance of the war has been a demand for rupee remittance, and the accumulation of immense reserves in the Paper Currency in London. These Reserves

overshadow the Gold Standard Reserve, and as they constitute the first line of defence, there is no chance of The Gold Standard Reserve being called upon for many years to come. Moreover the rise in the price of silver leaves no profit on coining, and the Reserve is therefore swollen only by the growth of interest. According to the latest return the position of the Reserve is as follows:—

Details of the balance of the Gold Standard Reserve on the 31st March 1919.

In England —

£

Estimated value on the 31st March 1919 of the Sterling Securities of the nominal value of £30,156,924 (as per details below) 29,729,505

Cash placed by the Secretary of State in Council at short notice 6,015,672

Total .. 35,745,177

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 Rupees = £1).

HEADS OF REVENUE.		1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19 (Revised Estimate).	1919-20 (Budget Estimate).
PRINCIPAL HEADS OF REVENUE:—		£	£	£	£	£	£	£	£
Land Revenue .. ..	..	21,282,468	21,391,575	21,221,539	22,031,161	22,041,265	21,607,246	20,805,900	22,686,400
Opium .. ..	..	5,124,592	1,624,878	1,572,210	1,913,514	3,160,005	3,078,903	3,229,000	3,056,200
Salt .. ..	..	3,334,374	3,445,305	3,910,790	3,647,587	4,82,260	5,499,487	4,216,300	3,914,300
Stamps .. ..	..	5,069,115	5,318,293	5,082,043	5,433,632	5,776,696	5,727,522	5,916,500	6,097,100
Excise .. ..	..	8,277,919	8,894,300	8,856,881	8,632,209	9,215,899	10,161,706	11,567,900	12,153,300
Provincial Rates .. ..	..	582,149	180,210	38,814	41,845	31,391	28,633	29,600	34,600
Customs .. ..	..	7,197,243	7,558,220	6,347,201	5,873,886	8,959,182	11,036,588	12,403,200	13,352,400
Assessed Taxes .. ..	..	1,742,397	1,950,250	2,036,733	2,090,109	3,772,967	6,308,104	7,320,800	13,554,900
Forest .. ..	..	2,153,009	2,229,872	1,980,652	2,074,128	2,470,795	2,731,284	2,904,200	3,352,800
Registration .. ..	..	482,022	518,962	485,295	518,879	540,581	527,590	553,300	568,200
Tributes from Native States .. ..	..	622,542	616,881	609,827	618,128	612,429	597,670	600,900	613,300
TOTAL .. ..	..	55,838,830	53,728,746	52,141,993	52,866,375	61,107,470	67,304,733	69,547,600	79,383,500
INTEREST .. ..	..	1,473,708	1,352,119	1,023,307	1,096,417	1,136,504	2,170,108	3,842,900	3,637,400
POST OFFICE .. ..	..	2,262,436	2,410,210	(a)	(a)	(a)	4,616,690	5,322,900	5,716,800
TELEGRAPH .. ..	..	1,174,124	1,188,309	3,596,973	(a) 3,787,478	4,174,607			
MINT .. ..	..	487,359	339,841	69,498	101,918	689,856	517,401	1,676,800	1,356,500
RECEIPTS BY CIVIL DEPARTMENTS:—									
Law and Justice:—									
Courts of Law .. ..	..	352,051	373,791	404,568	413,545	414,799	435,150	413,700	436,300
Jails .. ..	..	270,062	288,448	296,534	290,225	345,725	379,683	491,300	413,600
Police .. ..	..	135,553	130,339	141,281	143,199	155,038	133,246	188,700	128,600
Ports and Pilotage .. ..	..	156,746	153,609	140,330	125,394	123,419	102,997	136,500	125,500
Education .. ..	..	226,126	247,905	266,250	295,036	298,278	320,138	303,700	324,500
Medical .. ..	..	82,505	80,388	84,768	91,327	84,128	92,926	105,900	104,800
Sanitation .. ..	..	....	....	....	....	31,667	31,351	36,200	33,100
Agriculture .. ..	..	111,804	133,806	{ 163,217	{ 78,465	{ 91,111	{ 110,452	{ 135,900	{ 165,100
Scientific and other Minor Departments..	..	....	....	{ (b) 108,173	{ (b) 133,713	{ (b) 195,548	{ 325,421	{ 274,700	{ 226,000
TOTAL .. ..	..	1,334,847	1,408,286	1,505,120	1,579,904	1,739,713	1,935,364	2,086,600	1,957,500
MISCELLANEOUS RECEIPTS:—									
Receipts in aid of Superannuation, &c. ..	..	200,386	206,810	213,235	213,927	219,895	212,656	223,600	223,900
Stationery and Printing .. ..	..	92,078	93,416	97,594	89,134	96,034	94,049	110,000	104,500
Exchange .. ..	..	100,879	119,741	1,729	74,254	111,371	3,145,186	4,400,000	1,066,700
Miscellaneous .. ..	..	371,864	352,612	365,192	302,173	420,260	1,416,465	1,190,700	1,162,300
TOTAL .. ..	..	765,207	772,579	677,750	679,488	847,530	4,808,356	5,924,300	2,557,400
(a) Posts and Telegraphs.					(b)	Scientific and Miscellaneous Departments.			

GROSS REVENUE IN INDIA AND ENGLAND; IN £ (15 RUPEES=£1)—(contd.)

HEADS OF REVENUE.		1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19 (Revised Estimate).	1919-20 (Budget Estimate).
		£	£	£	£	£	£	£	£
RAILWAYS:									
State Railways (Gross Receipts)		36,686,364	37,546,135	36,105,167	38,176,193	41,964,000	45,947,521	51,053,900	53,331,900
<i>Devel—</i>									
Working Expenses and Surplus Profits paid to Companies.		19,391,729	20,013,602	20,376,709	20,290,504	20,749,538	21,899,799	25,810,900	32,160,000
Net Receipts									
Guaranteed Companies (Net Traffic Receipts)		17,294,635	17,532,533	15,728,458	17,885,689	21,215,062	24,017,722	25,213,000	21,221,900
Subsidized Companies (Government share of Surplus Profits and Repayment of Advances of Interest).		3,980 73,174	93,101	70,691	91,414	98,735	93,986	104,400	151,000
TOTAL		17,371,789	17,625,634	15,799,149	17,977,103	21,313,797	24,141,708	25,347,400	21,372,900
IRRIGATION:									
Major Works:									
Direct Receipts		2,607,478	2,765,966	2,758,490	2,737,991	3,011,227	2,990,581	3,132,500	3,226,900
Portion of Land Revenue due to Irrigation		1,338,245	1,634,374	1,667,864	1,773,720	1,827,108	1,768,895	1,937,300	1,959,000
Minor Works and Navigation		265,494	262,819	254,615	267,368	317,289	304,403	332,400	326,000
TOTAL		4,411,217	4,713,159	4,680,969	4,779,079	5,155,624	5,063,879	5,402,200	5,511,900
OTHER CIVIL PUBLIC WORKS		355,447	298,640	288,219	304,035	309,373	323,599	321,900	323,000
RECEIPTS BY MILITARY DEPARTMENT:									
Army:									
Effective		1,107,244	1,080,631	971,846	816,434	993,194	1,133,582	1,200,400	1,094,400
Non-effective		120,559	122,875	124,345	123,509	122,324	120,348	103,800	109,900
Marine									
Military Works		1,227,803	1,203,506	1,086,191	939,943	1,115,518	1,303,930	1,310,200	1,204,300
		87,669	89,542	198,115	223,263	365,027	322,155	313,400	299,000
		72,162	76,604	80,382	78,634	95,401	94,424	90,000	84,000
TOTAL		1,387,634	1,369,652	1,374,688	1,241,740	1,575,946	1,720,509	1,713,600	1,587,300
TOTAL REVENUE		86,862,598	85,207,175	81,157,666	84,413,537	98,050,430	112,662,347	121,186,200	123,404,200

The Railways.

The history of Indian Railways very closely reflects the financial vicissitudes of the country. Not for some time after the establishment of Railways in England was their construction in India contemplated, and then to test their applicability to Eastern conditions three experimental lines were sanctioned in 1845. These were from Calcutta to Raniganj (120 miles), the East Indian Railway; Bombay to Kalyan (33) miles, Great Indian Peninsula Railway; and Madras to Arkonam (39 miles), Madras Railway. Indian Railway building on a serious scale dates from Lord Dalhousie's great minute of 1853, wherein, after dwelling upon the great social, political and commercial advantages of connecting the chief cities by rail, he suggested a great scheme of trunk lines linking the Presidencies with each other and the inland regions with the principal ports. This reasoning commended itself to the Directors of the East India Company, and it was powerfully reinforced when, during the Mutiny, the barriers imposed on free communication were severely felt. As there was no private capital in India available for railway construction, English Companies, the interest on whose capital was guaranteed by the State, were formed for the purpose. By the end of 1859 contracts had been entered into with eight companies for the construction of 5,000 miles of line, involving a guaranteed capital of £52 millions. These companies were (1) The East Indian; (2) the Great Indian Peninsula; (3) the Madras; (4) the Bombay, Baroda and Central India; (5) the Eastern Bengal; (6) the Indian Branch, now the Oudh and Rohilkund State Railway; (7) the Sind, Punjab and Delhi, now merged in the North Western State Railway; (8) the Great Southern of India, now the South Indian Railway. The scheme laid the foundations of the Indian Railway system as it exists to-day.

Early Disappointments.

The main principle in the formation of these companies was a Government guarantee on their capital, for this was the only condition on which investors would come forward. This guarantee was five per cent. coupled with the free grant of all the land required; in return the companies were required to share the surplus profits with the Government, after the guaranteed interest had been met; the interest charges were calculated at 22½ to the rupee; the Railways were to be sold to Government on fixed terms at the close of twenty-five years and the Government were to exercise close control over expenditure and working. The early results were disappointing. Whilst the Railways greatly increased the efficiency of the administration, the mobility of the troops, the trade of the country, and the movement of the population, they failed to make profits sufficient to meet the guaranteed interest. Some critics attributed this to the unnecessarily high standard of construction adopted, and to the engineers' ignorance of local conditions: the result was that by 1869 the deficit on the Railway budget was Rs. 166½ lakhs. Seeking for some more economical method of construction, the Government

secured sanction to the building of lines by direct State Agency, and funds were allotted for the purpose, the metre gauge being adopted for cheapness. Funds soon lapsed and the money available had to be diverted to converting the Sind and Punjab lines from metre to broad-gauge for strategic reasons. Government had therefore again to resort to the system of guarantee, and the Indian Midland (1882-85), since absorbed by the Great Indian Peninsula; the Bengal-Nagpur (1883-87), the Southern Maratha (1882), and the Assam-Bengal (1891) were constructed under guarantees, but on easier terms than the first companies. Their total length was over 4,000 miles.

Famine and Frontiers.

In 1879, embarrassed by famine and by the fall of the exchange value of the rupee, Government again endeavoured to enlist unaided private enterprise. Four companies were promoted:—the Nilgiri, the Delhi-Umballa-Kalka, the Bengal Central, and the Bengal North-Western. The first became bankrupt, the second and third received guarantees, and the Tirhut Railway had to be leased to the fourth. A step of even greater importance was taken when Native States were invited to undertake construction in their own territories, and the Nizam's Government guaranteed the interest on 330 miles of line in the State of Hyderabad. This was the first of the large system of Native State Railways. In the first period up to 1870, 4,255 miles were opened, of which all save 45 were on the broad gauge; during the next ten years there were opened 4,239, making the total 8,494 (on the broad gauge 6,562, the metre 1,865, and narrow 67). Then ensued a period of financial ease. It was broken by the fall in exchange and the costly lines built on the frontier. The Penjdeh incident, which brought Great Britain and Russia to the verge of war, necessitated the connection of our outposts at Quetta and Chaman with the main trunk lines. The sections through the desolate Harnai and Bolan Passes were enormously costly; it is said that they might have been ballasted with rupees; the long tunnel under the Khojak Pass added largely to this necessity, but unprofitable outlay.

Rebate Terms Established.

This induced the fourth period—the system of rebates. Instead of a gold subsidy, companies were offered a rebate on the gross earnings of the traffic interchanged with the main line, so that the dividend might rise to four per cent. but the rebate was limited to 20 per cent. of the gross earnings. Under these conditions, there were promoted the Ahmedabad-Prantel, the South Behar, and the Southern Punjab, although only in the case of the first were the terms strictly adhered to. The Barsi Light Railway, on the two feet six inches gauge, entered the field without any guarantee, and with rolling stock designed to illustrate the carrying power of this gauge. The rebate terms being found unattractive in view of the competition of 4 per cent. trustee stocks, they were revised in 1896 to provide for an

absolute guarantee of 3 per cent. with a share of surplus profits, or rebate up to the full extent of the main line's net earnings in supplement of their own net earnings, the total being limited to 3½ per cent. on the capital outlay. Under these terms, a considerable number of feeder line companies was promoted, though in none were the conditions arbitrarily exacted. As these terms did not at first attain their purpose, they were further revised, and in lieu was substituted an increase in the rate of guarantee from 3 to 3½ per cent. and of rebate from 3½ to 5 per cent. with equal division of surplus profits over 5 per cent. in both cases. At last the requirements of the market were met, and there has since been a mild boom in feeder railway construction and the stock of all the sound companies promoted stands at a substantial premium.

Railway Profits Commence.

Meantime a much more important change was in progress. The gradual economic development of the country vastly increased the traffic, both passenger and goods. The falling in of the original contracts allowed Government to renew them on more favourable terms. The development of irrigation in the Punjab and Sind transformed the North-Western State Railway. Owing to the burden of maintaining the unprofitable Frontier lines, this was the Cinderella Railway in India—the scapegoat of the critics who protested against the unwisdom of constructing railways from borrowed capital. But with the completion of the Chenab and Jhelum Canals, the North-Western became one of the great grain lines of the world, choked with traffic at certain seasons of the year and making a large profit for the State. In 1900 the railways for the first time showed a small gain to the State. In succeeding years the net receipts grew rapidly. In the four years ended 1907-08 they averaged close upon £2 millions a year. In the following year there was a relapse. Bad harvests in India, accompanied by the monetary panic caused by the American financial crisis, led to a great falling off in receipts just when working expenses were rising, owing to the general increase in prices. Instead of a profit, there was a deficit of £1,240,000 in the railway accounts for 1908-09. But in the following year there was a reversion to a profit, and the net Railway gain has steadily increased. For the year ended March 1919 this gain amounted to £10,858,379. Although in a country like India, where the finances are mainly dependent upon the character of the monsoon, the railway revenue must fluctuate, there is no reason to anticipate a further deficit, but every ground for hoping that the railway profits will fill the vacuum in the Indian revenues caused by the cessation of the opium trade with China.

Contracts Revised.

A very important factor in this changed position is the revision of the original contracts under which the guaranteed lines were constructed. The five per cent. dividend, guaranteed at 22½ per rupee, and the half-yearly settlements made these companies a drain on the State at a time when their stock was at a high premium. The first contract

to fall in was the East Indian, the great line connecting Calcutta with Delhi and the Northern provinces. When the contract lapsed, the Government exercised their right of purchasing the line, paying the purchase-money in the form of terminable annuities, derived from revenue, carrying with them a sinking fund for the redemption of capital. The railway thus became a State line; but it was released to the Company which actually works it. Under these new conditions the East Indian Company brought to the State in the ten years ended 1909; after meeting all charges, including the payments on account of the terminable annuity by means of which the purchase of the line was made, and interest on all capital outlay subsequent to the date of purchase, a clear profit of nearly ten millions. At the end of seventy-four years from 1880, when the annuity expires, the Government will come into receipt of a clear yearly income of upwards of £2,700,000, equivalent to the creation of a capital of sixty to seventy millions sterling. No other railway shows results quite equal to the East Indian, because, in addition to serving a rich country by an easy line, it possesses its own collieries and enjoys cheap coal. But with allowance for these factors, all the other guaranteed companies which have been acquired under similar conditions as their contracts expired, have proportionately swelled the revenue and assets of the State. It is difficult to estimate the amount which must be added to the capital debt of the Indian railways in order to counter-balance the loss during the period when the revenue did not meet the interest charges. According to one estimate it should be £50 millions. But even if that figure be taken Government have a magnificent asset in their railway property.

Improving Open Lines.

These changes induced a corresponding change in Indian Railway policy. Up to 1900 the great work had been the provision of trunk lines. But with the completion of the Nagda-Muttra line, providing an alternative broad gauge route from Bombay to Delhi through Eastern Rajputana, the trunk system was virtually complete. A direct broad gauge route from Bombay to Sind is needed, but chiefly for strategic purposes. The poor commercial prospects of the line and the opposition of the Rao of Cutch to any through line in his territories, keep this scheme in the background. There does not exist any through rail connection between India and Burma, although several routes have been surveyed: the mountainous character of the region to be traversed, and the easy means of communication with Burma by sea, rob this scheme of any living importance. Further Survey work was undertaken in November 1914, the three routes to be surveyed being the coast route, the Manipur route, and the Hukong valley route. The metre gauge systems of Northern and Southern India must also be connected and Karachi given direct broad-gauge connection with Delhi, a project that is now under investigation. But these works are subordinate to the necessity for bringing the open lines up to their traffic requirements and providing them with feeders. The sudden

increase in the trade of India found the main lines totally unprepared. Costly works were necessary to double lines, improve the equipment, provide new and better yards and terminal facilities and to increase the rolling stock. Consequently the demands on the open lines have altogether overshadowed the provision of new lines. Even then the railway budget was found totally inadequate for the purpose, and a small Committee sat in London, under the chairmanship of Lord Incheape, to consider ways and means. This Committee found that the amount which could be remuneratively spent on railway construction in India was limited only by the capacity of the money market. They fixed the annual allotment at £12,000,000 a year. Even this reduced sum cannot always be provided.

Government Control.

As the original contracts carried a definite Government guarantee of interest, it was necessary for Government to exercise strong supervision and control over the expenditure during construction, and over management and expenditure after the lines were open for traffic. For these purposes a staff of Consulting Engineers was formed, and a whole system of checks and counterchecks established, leading up to the Railway Branch of the Public Works Department of the Government of India. As traffic developed, the Indian Railways outgrew this dry nursing, and when the original contracts expired, and the interests of Government and the Companies synchronised, it became not only vexatious but unnecessary. Accordingly in 1901-02 Mr. Thomas Robertson was deputed by the Secretary of State to examine the whole question of the organisation and working of the Indian Railways, and he recommended that the existing system should be replaced by a Railway Board, consisting of a Chairman and two members with a Secretary. The Board was formally constituted in March 1905. The Board is outside, but subordinate to the Government of India in which it is represented by the Department of Commerce and Industry. It prepares the railway programme of expenditure and considers the greater questions of policy and economy affecting all the lines. Its administrative duties include the construction of new lines by State agency, the carrying out of new works on open lines, the improvement of railway management with regard both to economy and public convenience, the arrangements for through traffic, the settlement of disputes between lines, the control and promotion of the staff on State lines, and the general supervision over the working and expenditure of the Company's lines. Two minor changes have taken place since the constitution of the Railway Board. In 1908, to meet the complaint that the Board was subjected to excessive control by the Department of Commerce and Industry, the powers of the Chairman were increased and he was given the status of a Secretary to Government with the right of independent access to the Viceroy; he usually sits in the Imperial Legislative Council as the representative of the Railway interest. In 1912 in consequence of complaints of the excessive interference of the

Board with the Companies, an informal mission was undertaken by Lord Incheape to reconcile differences. The constitution of the Board is now undergoing further inquiry, and the development generally favoured in the establishment of a Railway Member of the Viceroy's Executive Council.

Management.

The Railways managed by Companies have Boards of Directors in London. They are represented in India by an Agent, who has under him a Traffic Manager, a Chief Engineer, a Locomotive Superintendent, a Storekeeper, a Police Superintendent, (who is appointed by Government), and an Auditor. The State Railways are similarly organised.

Clearing House.

Proposals have several times been made for the establishment of a Clearing House but the distances are too great. The work which would ordinarily be done by the Clearing House is done by the Audit Office of each Railway.

The Railway Conference.

In order to facilitate the adjustment of domestic questions, the Railway Conference was instituted in 1876. This Conference was consolidated into a permanent body in 1903 under the title of the Indian Railway Conference Association. It is under the direct control of the railways, it elects a President from amongst the members, and it has done much useful work.

The Indian Gauges.

The standard gauge for India is five feet six inches. When construction was started the broad gauge school was strong, and it was thought advisable to have a broad gauge in order to resist the influence of cyclones. But in 1870, when the State system was adopted it was decided to find a more economical gauge, for the open lines had cost £17,000 a mile. After much deliberation, the metre gauge of 3 feet 3½ inches was adopted, because at that time the idea of adopting the metric system for India was in the air. The original intention was to make the metre gauge lines provisional; they were to be converted into broad gauge as soon as the traffic justified it; consequently they were built very light. But the traffic expanded with surprising rapidity, and it was found cheaper to improve the carrying power of the metre gauge lines than to convert them to the broad gauge. So, except in the Indus Valley, where the strategic situation demanded an unbroken gauge, the metre gauge lines were improved and they become a permanent feature in the railway system. Now there is a great metre gauge system north of the Ganges connected with the Rajputana lines and Kathiawar. Another System in Southern India embracing the Southern Maratha and the South India Systems. These are not yet connected, but the necessary link from Khandwa by way of the Nizam's Hyderabad-Godavari Railway, cannot be long delayed. All the Burma lines are on the metre gauge. Since the opening of the Barsi line, illustrating the capacity of the two feet six inch gauge; there has been developed a tendency to construct feeders on this rather than on the metre gauge.

STATISTICAL POSITION.

The period covered by the last administration report, 1918-1919, dealt with the close of the war and the first post-war period. This was the time when the railway difficulties were reaching their most acute phase. The demands for military purposes were higher than ever; at the same time the stock of material on which the Railways had been drawing had almost vanished and no new supplies were coming forward. If the war had been prolonged the situation would have grown exceedingly critical. Nevertheless there was a substantial increase both in traffic and in earnings and the fact that the higher traffic was carried with reduced equipment and a depleted staff is high testimony to the general soundness with which the Indian Railways have been managed in the past and the devotion which all ranks showed to duty.

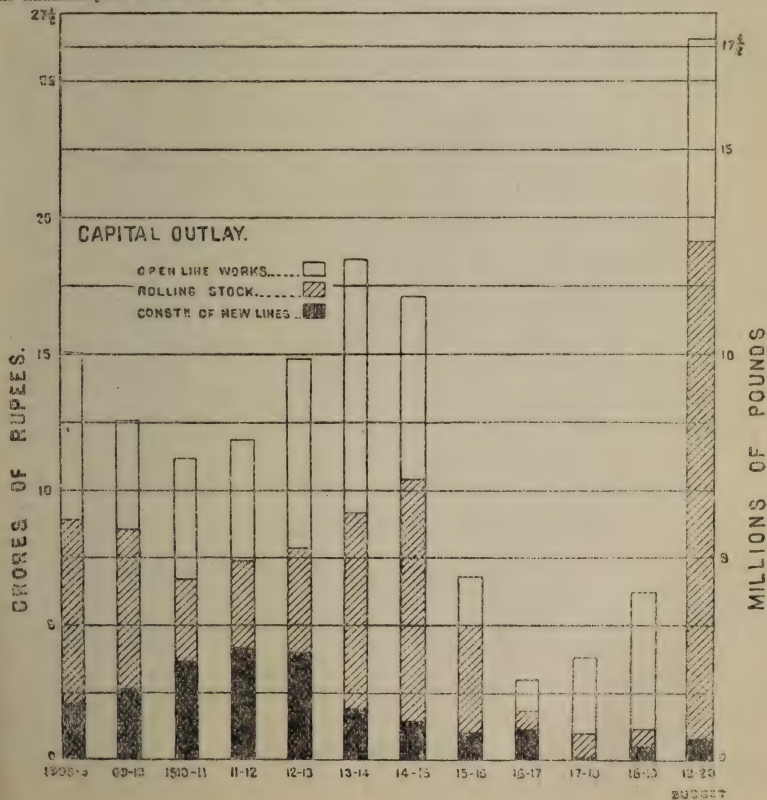
Capital Outlay.—The capital outlay incurred by the Government in the purchase and construction of its railways, including the liability which remains to be discharged by means of Annuity and Sinking Fund payments, amounted at the end of 1918-19 to £370,189,560.

The outlay incurred during 1918-19 was £4,159,870 distributed as follows:—

	Rs.
Open Line Works including	
suspense	5,02,45,046
Rolling-stock	70,69,000
New Lines	50,84,000
Total ..	6,23,98,046

Equivalent at Rs. 15=£ 1 to £4,159,870

The following diagram shows graphically how these figures compare with those of past years. The distribution of the grant of £17·7 millions (Rs. 2,655 lakhs) which has been sanctioned for the financial year 1919-20 is also added for purposes of comparison:—



The capital expenditure sanctioned for 1919-20 is £ 17·7 millions. This is the largest amount that has ever been allotted to railways in any one year. During the period of the war, the expenditure had to be reduced to the minimum not only for financial reasons, but also because of the difficulty in obtaining the necessary supply of materials. The result has been that the provision of transportation facilities has been unable to keep pace with the growth of traffic, and arrears have now to be made good. In view of the urgent demand, it was considered that rolling-stock equipment should take precedence over other requirements and orders for a large number of engines, coaching stock and goods vehicles have, accordingly, been placed. This stock, when received, will sensibly relieve the situation. In view of the heavy expenditure involved in this portion of the programme, it has not been found possible to provide in this year very liberally for works and this feature of our requirements

will receive special attention next year. For the same reason, it has not been found possible to provide for any new line, though a small provision has been allowed for lines already in progress.

The actual capital outlay on railways which have been financed by private enterprise, such as Branch Lines promoted by Companies, District Board Lines, Indian State Lines, etc., amounted at the end of 1918-19 to Rs. 69,01,14,000. The capital expenditure on such lines during the year was as follows :—

	Rs.
Branch Line Companies' Railways.	27,72,000
District Board Lines	25,000
Indian State Lines	34,48,000
Total	62,45,000

Results of Working.

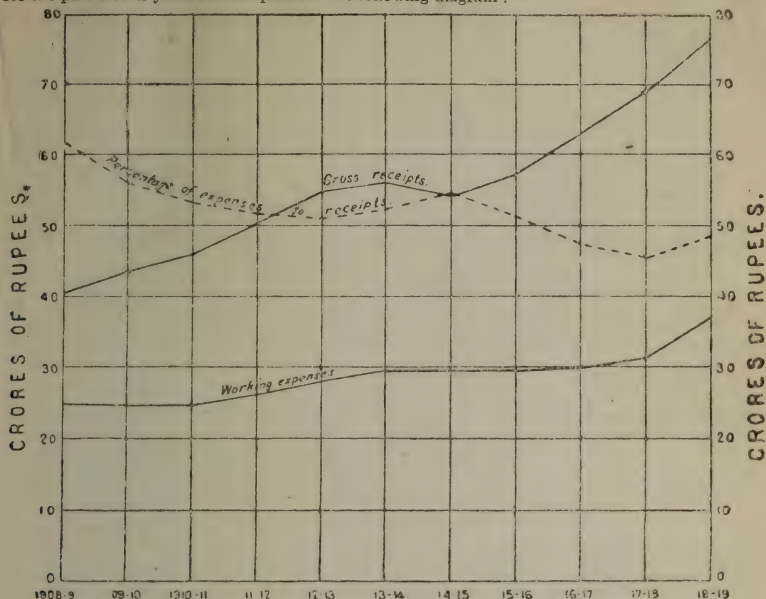
The following table compares the financial results attained in the working of the State Railways during the year 1918-19 with those of previous years (in the case of money the figures are shown in thousands) :—

—	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
	£	£	£	£	£	£
Capital at charge at end of each year	351,302	361,560	364,853	365,483	366,463	369,213
REVENUE.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Gross traffic receipts.—State Railways	56,31,92	54,15,78	57,26,43	62,94,69	68,92,13	76,25,70
Deduct.—Working Expenses	29,35,91	29,52,87	29,53,00	29,96,86	31,35,81	37,07,67
Net Receipts ..	26,96,01	24,62,91	27,73,43	32,97,83	37,56,32	39,18,03
	£	£	£	£	£	£
Equivalent in sterling Rs. 15=£1	17,973	16,419	18,489	21,086	25,042	26,120
Percentage of return on capital at charge ..	5.12	4.54	5.06	6.02	6.83	7.67

The net working profit from State Railways, after meeting interest and other miscellaneous charges, and certain Annuity and Sinking Fund payments which go to the discharge of debt, amounted in the year 1918-19 to £ 10,858,879.

Expenditure.

The gross receipts and revenue expenditure of the State lines worked by the State and Companies for the past eleven years are compared in the following diagram :—

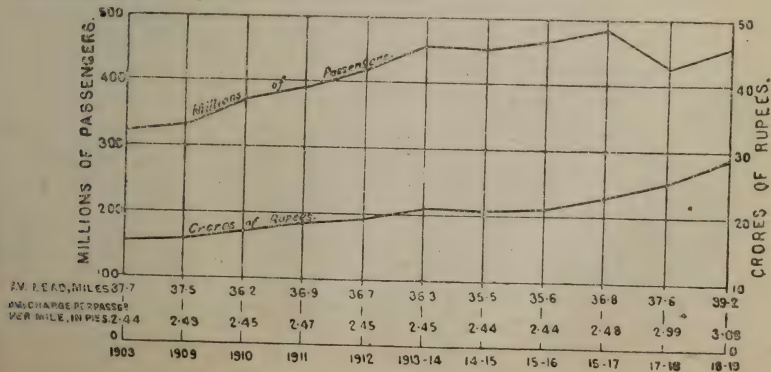


Receipts.

The receipts during the year 1918-19 amounted to Rs. 76.26 crores or Rs. 7.34 crores more than the actuals of 1917-18. This substantial improvement was attributable mainly to the increase in railway coal traffic, to larger receipts from the carriage of troops and military stores, and to increases in the ordinary passenger and

general merchandise traffic. The working expenses of the year exceeded those of 1917-18 by Rs. 5.72 crores. The increase was due to a larger programme of special repairs and renewals to payment to subordinate staff of railways of temporary increases of pay to the enhanced scales of pay of officers and subordinates sanctioned generally on railways and to the large increase in the train mileage run.

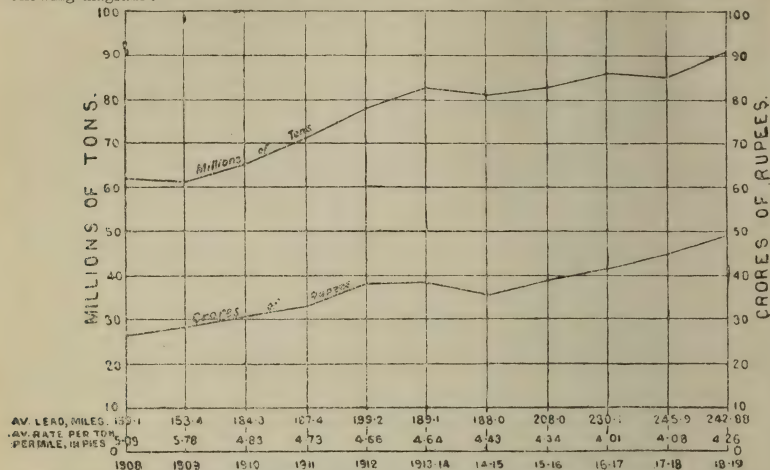
Passenger Traffic.—The numbers of passengers carried and the earnings therefrom on all Indian railways are compared below :—



AV. LOAD, MILES 37.7
AND CHARGE PER PASSENGER
PER MILE, IN PIES. 2.44

The increase in the passenger traffic compared with 1917-18 was chiefly due to the larger movements of pilgrims and marriage parties and also of troops, especially drafts and labour parties, and men on war furlough and under demobilisation.

Goods Traffic.—The tonnage of, and earnings from, goods traffic are compared in the following diagram :—



The better results under goods traffic compared with 1917-18 are attributable to the abnormally heavy traffic in rice and other foodgrains to the famine-affected areas. The larger movements of coal also accounts for a substantial increase.

The gross earnings of railways other than State lines, such as District Boards' lines, Indian State lines, etc., during 1918-19 amounted to Rs. 993.37 lakhs, as compared with Rs. 835.24 lakhs in 1917-18, being an increase of

Rs. 158.13 lakhs, and as the working expenses were more by Rs. 77.13 lakhs than the previous year, the net earnings showed an improvement of Rs. 81.00 lakhs having risen from Rs. 414.63 lakhs in 1917-18 to Rs. 495.63 lakhs in 1918-19. These net earnings yielded a return on the capital outlay (Rs. 67,31,76 lakhs) on open lines, that is on mileage earning revenue, of 7.36 per cent. as against 6.28 per cent. in 1917-18.

Mileage.—During the year 1918-19, 335.28 miles of railway were opened to traffic bringing the total mileage open (after allowing for dismantlements, and minor corrections due to realignments, etc.), up to 36,616 miles. The additional mileage was made up as follows :—

	5' 6" gauge.	3' 3½" gauge.	2' 6" gauge.	2' 0" gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State ..	115.00	..	..	..	115.00
State lines worked by Companies ..	12.32	40.78	..	..	53.10
Branch line Companies' railways under guarantee terms, worked by the Branch line Companies ..	..	..	18.25	..	18.25
Branch line Companies' railways under rebate terms, worked by the main line. ..	..	..	54.37	..	54.37
Branch line Companies' railways under guarantee and rebate terms ..	..	13.07	..	..	13.07
Companies' lines subsidized by the Government of India. ..	..	5.24	..	..	5.24
Unassisted Companies' lines ..	..	..	..	14.00	14.00
Indian State lines worked by Indian States. ..	..	14.70	..	..	14.70
Indian State lines worked by the main line. ..	..	14.17	33.38	..	47.55
TOTAL ..	127.32	87.96	106.00	14.00	335.28

Ten Years' Progress.—The progress made during the past ten years is summarised in the following table :—

Gauge.	MILEAGE OPEN AT THE END OF									
	1909.	1910.	1911.	1912	1913-14.	1914-15.	1915-16.	1916-17	1917-18.	1918-19.
5' 6" ..	16,309	16,701	17,016	17,189	17,641	17,827	18,060	18,182	17,876	17,994
3' 3 $\frac{3}{8}$ " ..	13,323	13,530	13,759	14,165	14,389	14,552	14,671	14,806	14,989	15,078
2' 6" ..	1,443	1,436	1,632	1,692	2,174	2,402	2,539	2,683	2,839	2,906
2' 0" ..	415	432	432	438	452	504	563	615	629	638
TOTAL ..	31,490	32,099	32,839	33,484	34,656	35,285	35,833	36,286	36,333	36,616

The decrease in the 5' 6" gauge mileage during the year 1917-18 is due to the dismantling of the whole of the Sutlej Valley railway and small portions of the North Western, East Indian, Madras and Southern Mahratta and Oudh and Rohilkhand Railways, the materials of which were required by Government in connection with the prosecution of the war.

New Works.—The total mileage under construction, or sanctioned for construction, at the close of the year was :—

	5'-6" gauge.	3'-3 $\frac{3}{8}$ " gauge.	2'-6" gauge.	2'-0" gauge.	Total.
	Miles.	Miles.	Miles.	Miles.	Miles.
State lines worked by the State ..	200.13	..	21.99	..	222.12
State lines worked by Companies ..	403.31	79.10	8.43	..	490.84
Branch line Companies' railways under guarantee terms, worked by the Branch line Companies .. ..	..	..	27.00	..	27.00
Branch line Companies' railways under guarantee terms, worked by the main line .. .. .	..	76.10	..	..	76.10
Branch line Companies' railways under rebate terms, worked by the main line.	14.30	..	114.16	..	128.46
Unassisted Companies' lines .. ..	..	..	20.50	..	20.50
District Board lines .. .. .	..	91.69	..	..	91.69
Indian State lines worked by Indian States .. .. .	..	390.96	46.09	57.28	494.33
Indian State lines worked by the main line .. .. .	..	153.81	98.45	..	252.2
TOTAL ..	617.74	791.66	336.62	57.28	1,803.30

Work on most of the new lines comprised in this statement was either held entirely in abeyance or could only be proceeded with very slowly as financial considerations and the limitations in the supply of essential materials permitted: in fact the principal activity (and that was very limited) was under lines financed by Branch Line Companies and Indian States. The following paragraphs show the position on some of the more important projects.

Branch Line Companies.—The Branch Line Terms underwent no change during the year. They provide for the grant by the Government of India of financial assistance to private companies furnishing capital for the construction of feeder lines to existing railways in either of the following terms:—

1. A firm guarantee by Government of a return of $3\frac{1}{2}$ per cent. on the paid up share capital of the Branch Line Company.

2. A rebate paid by the parent line from its net earnings from traffic brought to it by the branch, sufficient to make up a dividend of 5 per cent. on the paid up share capital; the liability of the main line being, however, limited to the total of its net earnings from such traffic.

The option is allowed to Companies, under certain circumstances, of raising a portion of their capital under guarantee terms and the remainder under rebate terms. Advantage was recently taken of this option by the Mymensingh-Bhairab Bazaar Railway Company, floated with an authorized capital of Rs. 86 lakhs of which Rs. 23 lakhs were raised under rebate terms and the balance under a guarantee.

In the province of Assam, on account of the relatively less developed state of the country and the difficulty experienced in obtaining capital for private railway enterprises under the ordinary terms, it has been provided that the Local Administration may in approved cases supplement the Imperial guarantee of $3\frac{1}{2}$ per cent. described above by the grant from provincial funds of an additional guarantee for a specified term of years of 1 per cent. on the paid up capital of the Company.

Lines Opened During the year.

Khulna-Bagerhat Railway.—This railway, 19.75 miles in length, on the 2' 6" gauge, commences at Rupsa East, on the left bank of the Rupsa river about two miles below Khulna railway station on the Eastern Bengal Railway, from which point it follows the left bank of the Bhyrab river in an easterly direction until Bagerhat is reached.

The river Bhyrab was formerly the chief means of transport between Khulna, Bagerhat, and Barisal; but it is now silting up and is navigable only at high tide by small boats. The railway will take the place of the river for the transport of goods and passengers between the first mentioned two stations. Steamers make connections with the railway at Rupsa East and Bagerhat. The railway was opened for public traffic on the 10th June 1918.

Samlaya-Timba Railway.—This line, 33.38 miles in length, is an extension of the Dabhoi Samlaya Railway of His Highness the Gaekwar's Dabhoi Railway System, and was con-

structed to further the development of the Savli Taluka of the Baroda State. It was opened for public traffic on the 1st February 1919 and is being worked by the Bombay, Baroda and Central India Railway Administration.

Arakon Light Railway.—This railway, which is on the 2' 6" gauge and 18.25 miles in length, commences at Buthidaung, on the Kalapanzin river, 65 miles north by river of the Port of Akyab, and runs in a westerly direction crossing the Ledwet Pass at mile 8 by means of a tunnel 645 feet long; from which point it descends till Maungdaw is reached at the 16th mile, the terminus on the Naaf River being $2\frac{1}{2}$ mile further on. It has been constructed with the object, chiefly, of serving the through traffic passing between the steamer services on the two rivers.

The line was opened for public traffic on the 15th February 1919.

Pachora-Jamner Railway.—This line, 34.62 miles in length on the 2' 6" gauge, has been built and will be worked by the Great Indian Peninsula Railway Company for the Pachora-Jamner Railway Company, under the rebate terms of the Branch Line Terms Resolution. The line was opened throughout for public traffic on 24th March 1919.

Private Enterprise.

The construction of branch lines with capital provided by companies floated in India and by District Boards or other local bodies has undergone no change during the year under review.

In view of the altered financial conditions which have followed the war, it is possible that an entire reconsideration of the methods hitherto followed for attracting Indian capital may be necessary.

No concessions were granted during the year either to Companies or to local bodies for the construction of new railways: but following the policy which they had framed before restrictions were imposed, the Railway Board, in order that there might be no undue delay in resuming a full programme of new construction on the return of more normal conditions, have carried on negotiations with Branch Line promoters, as far as possible, short of actual flotation, in regard to projects which were already under consideration before the war or have since been put forward. In accordance with this policy, the Railway Board had under their consideration when the year closed, proposals for the construction of a number of branch railways in all parts of India covering an aggregate mileage of 3,761 and involving a total expenditure of about 14½ millions sterling.

Important Lines Under Construction.

Itarsi Nagpur Railway with a Branch to the Pench Valley Coal Fields.—The whole project, 228 miles in length, will, when completed, form part of a direct through North and South broad gauge connection, but as so far constructed it furnishes an additional outlet for the traffic of the Pench Valley Coal Fields, an important source of coal supply in the difficulties caused by the war.

The project is divided into three sections, viz., Northern, from Itarsi to Amla; Southern, from Amla to Nagpur; and Eastern, from Amla to Parasia (Pench Valley Branch).

The Northern Section, Itarsi to Amla (80.56 miles), was completed and opened for traffic in September 1914.

The Eastern Section, Amla to Parasia (53.86 miles), was opened on the 1st November 1915.

On the Southern Section, Amla to Nagpur (163.74 miles), the work on tunnels and earth-work is in hand only on Division No. 3 (Amla to Pandhurna), the remaining work on this Division and all works on Division No. 4 (Pandhurna to Nagpur) having been postponed till the end of the war.

The construction of the Bombay Overhead Connection involves much heavy work in the heart of the city and will provide an easy rapid communication for traders, passing between the business centre of Bombay in the vicinity of Victoria Terminus across the Great Indian Peninsula Railway Goods Yard at Wadi Bunder to the grain warehouses and cotton market near Mazagaon on the Harbour Branch Railway.

Owing to the difficulty of obtaining girder work it is not possible to say when this line will be opened.

Secunderabad-Gadwal Railway.—The Secunderabad Gadwal Railway which is being constructed by the Nizam's Guaranteed State Railways Company, is the property of His Exalted Highness the Nizam's Government. When completed, it will afford an outlet to the port of Mormugao from the southern parts of the Hyderabad State, and will link up the metre gauge system of that State with the metre gauge sections of the Madras and Southern Mahratta and South Indian Railways.

The first section from Secunderabad to Mahabubnagar, 70.20 miles, was opened throughout to passenger traffic on the 1st October 1916; and the second section Mahabubnagar to Wanaparty Road, 33.10 miles, on the 1st April 1917. Owing to the non-delivery of permanent way material the construction of the remaining section was suspended till the end of the war.

The open sections are being worked by the Nizam's Guaranteed State Railways Company under the terms of an agreement between His Exalted Highness the Nizam's Government and the Company.

Nushki Extension Railway.—This extension of the Quetta-Nushki Railway was started in September 1916. The country passed through is desert but topographically easy, being a series of gentle undulations of sand and shingle merging into stone covered with clay and salty conglomerate.

The first 13 miles of the line, from Nushki to Ahmedwal, was handed over for passenger traffic in April 1919, and the portion from Ahmedwal to Balbandin, 102 miles, is expected to be opened for passenger traffic during the cold weather of 1919. A further length of 185 miles up to Mirjawa is under construction, railhead having reached that point. There are no works or features of special interest.

Shimoga-Arasalu Railway.—This is a metre gauge line, 26.80 miles in length. It is an extension of the Birur Shimoga Branch of the Mysore State Railways and is the first section of the lines that will be constructed to open up the western portion of the Shimoga District and possibly to connect with a port on the West Coast. Construction was started during February 1919.

New Construction in Indian States.

The progress of new construction in Indian States has also slackened owing partly to the difficulty in obtaining permanent way materials and rolling stock and partly to lack of funds caused by the further large contributions, direct and indirect, which the Indian States have made to the Imperial resources for the conduct of the war. The following new lines were, however, sanctioned during the year under review :—

MYSORE.

Railways.	Length in miles.
1. Shimoga-Arasalu (metre gauge) ..	26.80
2. Kammanagundi-Benkipur (2' 0" gauge) ..	22.96
3. Agasanhadlu-Benkipur (2' 0" gauge) ..	24.74

DHOLPUR.

Dholpur-Rajkhera (2' 6" gauge) ..	22.34
-----------------------------------	-------

The following table gives a complete list of railways which were under construction in Indian States during the year :—

BARODA STATE.

Railways.	Length in miles.
1. Choranda-Koral (2' 6" gauge) ..	11.68
2. Bhoyani Road-Behrari (metre gauge) ..	22.12
3. Motipura-Tankhala (2' 6" gauge) ..	26.29
4. Okhamandal (metre gauge) ..	37.02

BHAVNAGAR.

Savar Kundla-Mahuva with branch to Port Albert Victor (metre gauge) ..	51.30
--	-------

CUTCH.

Anjar-Barhan (2' 6" gauge) ..	23.75
-------------------------------	-------

HYDERABAD.

Wanaparty Road-Gadwal (metre gauge) ..	13.45
--	-------

JAIPUR.

1. Palsana-Sikar (metre gauge) ..	16.80
2. Sikar-Jhunpura (metre gauge) ..	39.85

JODHPUR.

Marwar-Sanderao (metre gauge) ..	77.83
----------------------------------	-------

JUNAGAD.

Talala-Una (metre gauge) ..	42.08
-----------------------------	-------

MYSORE.

1. Tadasa-Hebbe (2' 0" gauge) ..	9.58
2. Chickjaur-Chitaldrug (metre gauge) ..	20.90
3. Shimoga-Arasalu (metre gauge) ..	26.80
4. Kammanagundi-Benkipur (2' 0" gauge) ..	22.96
5. Agasanhadlu-Benkipur (2' 0" gauge) ..	24.74

Amongst the Indian States which now own property in the shape of railways are :—

Baroda, Hyderabad, Bhavnagar, Gondal, Porbandar, Jodhpur, Bhopal, Patiala, Morvi, Junagad, Kashmir, Kolhapur, Rajkot, Jetpur, Mysore, Cooch Behar, Gwalior, Mewar, Kotah, Navanagar, Rappla, Bikaner, Dhrangadra, Parlakimedi, Cambay, Malerkotla, Jind, Cochin, Travancore, Cutch, Jaipur, Mourbhanj, Sangli, Dholpur, and Bahawalpur. The order in which these names are given represents approximately the sequence in which the different States first began to interest themselves in schemes of railway extension.

The total mileage of railways in Indian States open to traffic at the close of the year was 5,090 miles, distributed between the various gauges as under :—

	Miles.
5' 6" gauge	962
3' 3 3/4" gauge	3,230
2' 6" gauge	596
2' 0" gauge	302

THE CHIEF RAILWAYS IN INDIA.

The Assam-Bengal Railway, which is constructed on the metre gauge, starts from Chittagong and runs through Surma Valley across the North Cachar Hills into Assam. It is worked under a limited guarantee by a company whose contract is terminable in 1921.

Mileage open	.. ..	970.09.
Capital outlay	.. ..	18,16,61,000.
Net earnings	.. ..	20,65,000.
Earnings per cent.	.. ..	1.15.

Bengal and North-Western.

The Bengal and North-Western Railway was constructed on the metre gauge system by a company without any Government assistance other than free land and was opened to traffic in 1885. The system was begun in 1874 as the Tirhut State Railway. In 1890 this line was leased by Government to the Bengal and North-Western Railway. Since then extensive additions have been made in both sections. It is connected with the Rajputana metre gauge system at Cawnpore and with the Eastern Bengal State Railway at Khatihar and the Oudh and Rohilkhand Railway at Benares.

Mileage open	.. ..	2,062.45.
Capital outlay	.. ..	17,61,41,000.
Net earnings	.. ..	1,54,94,000.
Earnings per cent.	.. ..	8.80.

Bengal-Nagpur.

The Bengal-Nagpur Railway was commenced as a metre gauge from Nagpur to Chhatisgarh in the Central Provinces in 1887. A company was formed under a guarantee which took over the line, converted it to the broad gauge and extended it to Howrah, Cuttack and Katni. In 1901 a part of the East Coast State Railway from Cuttack to Vizagapatam was transferred to it and in the same year sanction was given for an extension to the coal fields and for a connection with the Branch or the East Indian Railway at Hariharpur.

Mileage open	.. ..	2,732.4.
Capital outlay	.. ..	Rs. 41,98,41,000.
Net earnings	.. ..	Rs. 3,13,17,000.
Earnings per cent.	.. ..	7.48.

Bombay Baroda.

The Bombay, Baroda and Central India Railway is one of the original guaranteed railways. It was commenced from Surat *via* Baroda to Ahmedabad, but was subsequently extended to Bombay. The original contract was terminable in 1880, but the period was extended to 1905; and then renewed under revised conditions. In 1885 the Rajputana Malwa metre gauge system of State railways was leased to the Company and has since been incorporated in it. On the opening of the Nagda-Muttra, giving broad gauge connection through Eastern Rajputana with Delhi the working was entrusted to this Company. On the acquisition of the Company in April 1907 the purchase price was fixed at £11,685,581.

Mileage open	.. ..	1,578.42.
Capital outlay	.. ..	28,92,53,000.
Net earnings	.. ..	3,21,15,000.
Earnings per cent.	.. ..	11.13.

Burma Railways.

The Burma Railway is an isolated line, and although various routes have been surveyed there is little prospect of its being connected with the Railway system of India in the near future. In reply to a question in the Imperial Legislative Council in 1919, Sir Arthur Anderson said:—"During 1914-15 extensive survey operations were carried out to ascertain the best alignment for a railway connection along the coast route between Chitagon and certain stations on the Burma Railways south of Mandalay. A rival route via the Hukong Valley between the northern section of the Assam-Bengal Railway and the section of the Burma Railways north of Mandalay was to have been surveyed during the following year but was postponed because of the war. It is now proposed to commence this survey during the coming cold weather, and on its completion, Government will have sufficient information to enable them to decide which route shall be adopted. Thus no arrangements for the construction of a line have yet been made nor has any concession been granted, but it is probable that the line selected will be built at the cost of Government and worked by one or other of the main lines which it will connect." It was comm. ned as a State Railway and transferred in 1896 to a Company under a guarantee.

Mileage open	.. ..	1,604.98
Capital outlay	.. ..	21,47,14,000
Net earnings	.. ..	1,34,67,000.
Earnings per cent.	.. ..	6.27.

Eastern Bengal.

The Eastern Bengal State Railway was promoted under the original form of guarantee and was constructed on the broad gauge. The first portion of the line running to Calcutta over the Ganges was opened in 1862. In 1874 sanction was granted for the construction on the metre gauge of the Northern Bengal State Railway, which ran from the north bank of the Ganges to the foot of the Himalayas on the way to Darjeeling. These two portions of the line were amalgamated in 1884 into one State Railway.

Mileage open	.. ..	621.21.
Capital outlay	.. ..	24,66,88,000.
Net earnings	.. ..	1,00,99,000.
Earnings per cent.	.. ..	4.09.

The East Indian.

The East Indian Railway is one of the three railways sanctioned for construction as experimental lines under the old form of guarantee. The first section from Howrah to Pandua was opened in 1854 and at the time of the Mutiny ran as far as Raniganj. It gives the only direct access to the port of Calcutta from Northern India and is consequently fed by all the large railway systems connected with it. In 1880 the Government purchased the line, paying the shareholders by annuities, but leased it again to the company to work under a contract which is terminable in 1919.

Mileage open	.. ..	2,770.84.
Capital outlay	.. ..	76,02,93,000.
Net earnings	.. ..	9,95,01,000.
Earnings per cent.	.. ..	11.90.

Great Indian Peninsula.

The Great Indian Peninsula Railway is the earliest line undertaken in India. It was promoted by a Company under a guarantee of 5 per cent. and the first section from Bombay to Thana was open for traffic in 1853. Sanction was given for the extension of this line *via* Poona to Raichur, where it connects with the Madras Railway, and to Jubbulpore where it meets the East Indian Railway. The feature of the line is the passage of the Western Ghats, these sections being $15\frac{1}{2}$ miles on the Bhore Ghat and $9\frac{1}{4}$ miles on the Thul Ghat which rise 1,131 and 972 feet. In 1900, the contract with the Government terminated and under an arrangement with the Indian Midland Railway that line was amalgamated and leased to a Company to work.

Mileage open	.. ..	3,335.26.
Capital outlay	.. ..	72,61,05,000.
Net earnings	.. ..	5,54,20,000.
Earnings per cent.	.. ..	7.63.

Madras Railway.

The Madras Railway was the third of the original railways constructed as experimental lines under the old form of guarantee. It was projected to run in a north-westerly direction in connection with the Great Indian Peninsula Railway and in a south-westerly direction to Calicut. On the expiry of the contract in 1907 the line was amalgamated with the Southern Mahratta Railway Company, a system on the metre gauge built to meet the famine conditions in the Southern Mahratta Country and released to a large Company called the Madras and Southern Mahratta Railway Company. The mileage is 3,169.01.

Mileage open	.. ..	1,063.11.
Capital outlay	.. ..	19,35,79,000.
Net earnings	.. ..	1,89,39,000.
Earnings per cent.	.. ..	9.78.

The North-Western.

The North-Western State Railway began its existence at the Sind-Punjab-Delhi Railway, which was promoted by a Company under the original form of guarantee and extended to Delhi, Multan and Lahore and from Karachi to Kotri. The interval between Kotri and Multan was unbridged and the railway traffic was exchanged by a ferry service. In 1871-72 sanction was given for the connection of this by the Indus Valley State Railways and at the same time the Punjab Northern State Railway from Lahore towards Peshawar was begun. In 1886 the Sind-Punjab-Delhi Railway was acquired by the State and amalgamated with these two railways under the name of the North-

Western State Railway. It is the longest railway in India under one administration.

Mileage open	.. ..	5,340.95.
Capital outlay	.. ..	1,00,16,01,000.
Net earnings	.. ..	6,58,13,000.
Earnings per cent.	.. ..	6.64.

Oudh and Rohilkhand.

Oudh and Rohilkhand Railway was another of the lines constructed under the original form of guarantee. It began from the north bank of the Ganges running through Rohilkhand as far as Saharanpur where it joins the North-Western State Railway. It was not until 1887 that the bridge over the Ganges was completed and connected with the East Indian Railway. To effect a connection between the metre gauge systems to the North and those to the South of the Ganges, a third rail was laid between Bhuriwal and Cawnpore. The Company's contract expired in 1889 when the Railway was purchased by the State and has since been worked as a State Railway.

Mileage open	.. ..	1,624.33.
Capital outlay	.. ..	21,96,19,000.
Net earnings	.. ..	1,97,17,000.
Earnings per cent.	.. ..	8.98.

The South Indian.

The South Indian Railway was one of the original guaranteed railways. It was begun by the Great Southern India Railway Company as a broad gauge line; but was converted after the seventies to the metre gauge. This line has been extended and now serves the whole of the Southern India, south of the south-west line of the Madras Railway. Between Tuticorin and Ceylon a ferry service was formerly maintained, but a new and more direct route to Ceylon *via* Rameshwaram was opened at the beginning of 1914. As the original contract ended in 1907, a new contract was entered up on with the Company on the 1st of January 1908.

Mileage open	.. ..	449.80.
Capital outlay	.. ..	7,23,81,000.
Net earnings	.. ..	68,03,000.
Earnings per cent.	.. ..	9.40.

The Native States.

The principal Native State Railways are: The Nizam's, constructed by a company under a guarantee from the Hyderabad State; the Kathiawar system of railways, constructed by subscriptions, among the several Chiefs in Kathiawar; the Jodhpur-Bikaner Railway, constructed by the Jodhpur and Bikaner Chiefs; the system of railways in the Punjab, constructed by the Patiala, Jind, Maler Kotla, and Kashmir Chiefs; and the railways in Mysore, constructed by the Mysore State.

INDIA AND CEYLON.

The possibility of connecting India and Ceylon by a railway across the bank of sand extending the whole way from Rameswaram to Mannar has been reported on from time to time, since 1895 various schemes having been suggested.

The South Indian Railway having been extended to Dhanushkodi, the southernmost point of Rameswaram Island, and the Ceylon Government Railway to Talaimannar, on Mannar Island, two points distant from each other

about 21 miles across a narrow and shallow strait, the project has again been investigated with the idea of connecting these two terminal stations by a railway constructed on a solid embankment raised on the sand bank known as "Adam's Bridge", to supersede the ferry steamer service which has been established between these two points.

In 1913, a detailed survey was made by the South Indian Railway Company, and a project has now been prepared. This project contemplates the construction of a causeway from Dhanushkodi Point on the Indian side to Talaimannar Point on the Ceylon side, a length of 20.05 miles of which 7.19 will be upon the dry land of the various lands, and 12.86 will be in water. The sections on dry land will consist of low banks of sand pitched with coral and present no difficulty. The section through the sea will be carried on a causeway which it is proposed to construct in the following way. A double row of reinforced concrete piles, pitched at 10 feet centres and having their inner faces 14 feet apart, will first be driven into the sand. These piles will then be braced together longitudinally with light concrete arches and chains and transversely with concrete ties, struts and chains. Behind the piles slabs of reinforced concrete will be slipped into position, the bottom slabs being sunk well into the sand of the sea bottom. Lastly, the space enclosed by the slabs will be filled in with sand.

The top of the concrete work will be carried to six feet above high water level, and the rails will be laid at that level. The sinking of the piles and slabs will be done by means of water jets. This causeway, it is expected, will cause the suspended sand brought up by the currents, to settle on either side bringing about rapid accretion and eventually making one big island of Rameswaram island and Mannar island.

If this method of construction is adopted, it is estimated that the total cost of the causeway and works at the two terminal points, *viz.*—Dhanushkodi and Talaimannar will be approximately 111 lakhs.

Indo-Burma Connection.

The raids of the Emden in the Bay of Bengal in 1914, and the temporary interruption of communications between India and Burma, stimulated the demand for a direct railway connection between India and Burma. Government accepted the position and appointed Mr. Richards, M. Inst. C.E., to be the engineer-in-charge of the surveys to determine the best route for a railway from India to Burma. The coast route appears to be the favoured one. This would start from Chittagong, which is the terminus and head-quarters of the Assam-Bengal Railway and a seaport for the produce

of Assam. The route runs southwards through the Chittagong district, a land of fertile rice fields intersected by big rivers and tidal creeks and it crosses the Indo-Burma frontier, 94 miles from the town of Chittagong. For about 160 miles further it chiefly runs through the fertile rice lands of Arrakan and crosses all the big tidal rivers of the Akyab delta. These include the Kalidan river which drains 4,700 miles of country and even at a distance of about 30 miles from its mouth is more than half a mile wide. About 260 miles from Chittagong the railway would run into the region of mangrove swamps which fringe the seacoast north and south of the harbour of Kaukkphu stretching out into the mangrove swamps like ribs from the backbone. Innumerable spurs of the Arrakan Yoma have to be crossed. Yoma is a mountain ridge which extends from Cape Negrais northwards until it loses itself in a mass of tangled hills east of Akyab and Chittagong. At its southern end the height of the ridge is insignificant but it has peaks as high as 4,000 feet before it reaches the altitude of Sandway and further north it rises much higher. It is a formidable obstacle to railway communication between India and Burma. This route is estimated to cost about £7,000,000 and would have to be supplemented by branch lines to Akyab where there is at present a considerable rice traffic and the cost of this would have to be added to the £7,000,000 already referred to.

The other routes examined have been the Hukong Valley route and the Manipur route which were surveyed by the late Mr. R. A. Way many years ago. The Manipur route is estimated to cost about £5,000,000 as it has to cross three main ranges of hills with summit levels of 2,650, 3,600 and 8,900 feet long. Altogether there would be about four miles of tunnelling through the three main ridges and through other hills and more than 100 miles of expensive undulating railway with grades as steep as 1 in 50 and 11,000 feet of aggregate rise and fall. The Hukong valley route seems to be the cheapest one as it is estimated to cost £3,500,000. This line is only about 284 miles long and it presents fewer engineering difficulties than either the Coast or the Manipur route. One hundred and fifty miles of this route lie in open country capable of cultivation though at present it is only very thinly populated. Only one range of hills has to be crossed and this can be negotiated with a summit tunnel of 5,000 feet long at a height of 2,500 feet. There are less than fifty miles of very heavy work and only about 4,500 ft. aggregate of rise and fall.

It is understood that the construction of this line will constitute one of the first changes on the Railway Budget when normal conditions are restored.

	Particulars.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
1	Mileage open at close of the calendar year Miles	32,099	32,839	33,484	34,652	35,285	35,833	36,286	36,334
2	Total Capital outlay, including ferries and suspense, on open lines (in thousands of rupees) .. Rs.	4,29,04.73	4,50,06.80	4,65,15.00	4,95,08.64	5,19,22.13	5,29,97.29	5,35,27.97	5,41,79.90
3	Gross earnings (in thousands of rupees) "	51,14.22	55,27.92	61,65.07	63,58.56	60,42.91	64,66.04	70,68.42	77,36.39
4	Gross earnings per mile open .. "	15,936	16,883	18,412	18,350	17,123	18,041	19,480	21,292
5	Gross earnings per mile open per week "	306	324	354	353	329	347	375	409
6	Gross earnings per train-mile .. "	3.85	3.87	4.04	4.07	3.84	4.07	4.32	4.93
7	Total working expenses (in thousands of rupees) "	27,15.72	28,83.92	30,15.92	32,93.04	32,74.10	32,91.95	33,40.32	35,36.87
8	Working expenses per mile open .. "	8,462	8,782	9,007	9,504	9,279	9,185	9,266	9,734
9	Working expenses per train-mile .. "	2.04	2.02	1.93	2.11	2.08	2.07	2.04	2.25
10	Percentage of working expenses to gross earnings .. Per cent.	53.10	52.17	48.92	51.79	54.19	50.91	47.26	45.72
11	Net earnings (in thousands of rupees) Rs.	23,98.50	26,44.00	31,49.15	30,65.52	27,67.91	31,74.09	37,28.10	41,99.52
12	Net earnings per mile open .. "	7,474	8,051	9,405	8,846	7,844	8,856	10,274	11,558
13	Net earnings per train-mile .. "	1.81	1.85	2.06	1.96	1.78	2.00	2.28	2.48
14	Percentage of net earnings on total capital outlay (Item 2) .. Per cent.	5.46	5.87	6.77	6.19	5.33	5.99	6.96	7.75
15	Coaching train-miles (in thousands) Train-miles	48,598	50,833	52,093	55,972	58,569	56,364	55,719	44,407

Main results of working of all Indian Railways treated as one system—*contd.*

	Particulars.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
16	Goods train-miles (in thousands)	47,690	53,219	59,992	57,933	56,359	62,766	68,083	72,528
17	Mixed train-miles (in thousands)..	31,986	33,746	34,940	34,581	35,514	34,471	34,874	34,618
18	Total, including miscellaneous train-miles (in thousands) ..	132,823	142,944	152,761	156,276	157,142	159,038	163,604	157,036
19	Unit-mileage of passengers (in thousands) ..	13,432,477	14,372,943	15,318,872	16,614,088	16,022,849	16,528,646	17,846,064	16,204,392
20	Freight ton-mileage of goods (in thousands) ..	12,092,916	13,358,264	15,628,595	15,623,235	15,225,957	17,157,841	19,825,901	21,015,126
21	Average miles a ton of goods was carried ..	184.33	187.44	199.15	189.11	188.04	207.98	230.08	245.87
22	Average rate charged for carrying a ton of goods one mile ..	4.83	4.73	4.66	4.64	4.43	4.34	4.01	4.07
	<i>Average miles a passenger was carried.</i>								
23	1st class ..	99.72	111.60	106.54	112.46	123.88	113.18	126.60	124.99
24	2nd class ..	73.07	76.33	74.77	74.58	80.04	93.44	106.88	96.58
25	Intermediate class ..	52.41	57.27	51.90	51.13	49.72	50.20	52.17	71.54
26	3rd class ..	37.12	37.72	37.81	37.40	36.59	36.60	37.56	38.91
27	Season and Vendors' tickets ..	8.79	8.78	8.64	8.71	8.50	8.52	8.46	8.54
28	Total ..	36.15	36.37	36.72	36.30	35.52	35.59	36.82	37.66
	<i>Average rate charged per passenger per mile.</i>								
29	1st class ..	14.55	14.29	14.25	14.48	12.79	13.68	13.32	16.58
30	2nd class ..	6.67	6.73	6.64	6.60	6.23	6.50	5.07	6.76
31	Intermediate class ..	3.15	3.10	3.12	3.14	3.16	3.16	3.14	4.02
32	3rd class ..	2.28	2.30	2.30	2.29	2.29	2.29	2.32	2.73
33	Season and Vendors' tickets ..	1.42	1.43	1.45	1.42	1.42	1.42	1.43	1.50
34	Total ..	2.45	2.47	2.45	2.45	2.44	2.44	2.48	2.99

§ Mileage of Railway Lines in India open for Traffic at end of year.

Railways.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
STATE LINES.										
Agra Delhi Chord*	126	126	126	126	126	126	126	126	126	126
Assam-Bengal*	775	771	790	790	805	812	848	808	823	869
Baran-Kotah*	14	40	40	40	40	40	40	40	40	40
Bengal-Nagpur*	1,774	1,791	1,808	1,852	1,852	1,877	1,877	1,889	1,889	1,889
Bezawda Extension*	21	21	21	21	21	21	21	21	21	21
Bhopal-Itarsi*	13	13	13	12	12	12	12	12	12	13
Bombay, Baroda & Central India*	504	504	504	504	2,762	2,812	2,812	2,818	2,818	2,818
Broach-Jambusar*	1,527	1,527	1,527	1,527	1,529	1,529	1,529	1,529	1,529	1,529
Burma**	..	..	..	..	..	..	..	..	..	..
Cawnpore-Banda*	80	80	80	80	80	80	80	80	80	80
Cawnpore-Burhwal	32	32	32	32	32	32	32	32	32	32
Dhone-Kurnool*	2,213	2,212	2,213	2,266	2,331	2,424	2,446	2,448	2,495	2,464
East Indian*	1,274	1,503	1,508	1,510	1,570	1,581	1,639	1,639	1,628	1,582
Eastern Bengal	148	153	183	181	181	216	216	217	217	217
Gondia-Chanda*	1,599	1,599	1,606	2,420	2,419	2,484	2,500	2,554	2,552	2,553
Great Indian Peninsula*	813	813	813	†	†	†	†	†	†	†
Indian Midland*	124	124	124	124	124	124	124	124	124	124
Jabalpur-Hissar	32	32	30	32	32	32	32	32	32	32
Jodhpur-Hyderabad*	250	275	275	275	276	311	312	312	312	312
Jorhat Provincial State	59	60	60	60	60	60	60	60	60	60
Jubbulpore-Gondia*	62	62	62	62	62	62	62	62	62	62
Kalka-Simla	237	237	237	258	296	298	313	313	313	312
Kohat-Thal	2,543	2,546	2,553	2,553	2,553	2,553	2,552	2,568	2,567	2,550
Lucknow-Bareilly*	19	19	19	19	19	74	74	74	73	73
Madras and Southern Mahratta*	296	..	296	296	296	296	296	296	296	296
Morappur-Hosur*	137	296	339	339	..	..	..	..	..	97
Mysore Section of Madras & Southern Mahratta Railway.*	..	339	..	51	51	..	..	..	..	..
Nagda-Muttra*	..	..	..	..	..	..	..	..	..	..
Nagpur Chhindwara*	..	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company.

† Amalgamated with Eastern Bengal Railway.

‡ Now worked by Great Indian Peninsula Railway.

§ These are the latest figures published in 1918.

† Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
<i>STATE LINES—Contd.</i>										
Nilgiri*	29	29	29	29	29	29	29	29	29	29
North-Western ..	3,463	3,568	3,570	3,656	3,650	3,710	3,709	3,758	3,761	3,690
Nowshera-Durgai ..	40	40	40	40	40	40	40	40	40	140
Oudh and Rohilkhand ..	1,223	1,231	1,327	1,434	1,524	1,525	1,626	1,527	1,527	1,512
Palaup-Deesa*	17	17	17	17	17	17	17	17	17	17
Purulia-Ranchi*	72	73	73	73	73	115	115	115	115	115
Rajpur-Dhamtari *	57	57	57	57	57	57	57	57	57	57
Rajputana-Malwa*	1,778	1,778	1,778	1,778	†	†	†	†	†	..
South Indian*	1,323	1,323	1,323	1,323	1,323	1,326	1,327	1,327	1,327	1,327
Southern Shan States..	..	..	..	..	16	23	70	70	70	70
Tinnevely-Quilon*	50	50	50	50	50	50	50	50	50	50
Tirhoot*	775	775	776	769	792	788	788	826	812	804
Tirupattur-Krishnagiri*	25	25	25	25	25	25	25	25	25	25
Trans Indus (Kalatagh-Bannu) *	..	..	..	..	..	89	89	89	135	135
Tunisar-Tirodi Light *	..	..	..	..	..	..	..	..	51	51
<i>ASSISTED COMPANIES.</i>										
Ahmedabad-Dholka ..	33	33	33	33	33	34	34	34	34	34
Ahmedabad-Parantij ..	55	55	55	89	89	89	89	89	89	89
Ahmadpur-Katwa ..	..	..	..	..	..	..	..	..	..	32
Amritsar-Patti ..	28	28	54	54	54	54	54	54	54	54
Arrah-Sasaram Light ..	..	..	..	61	61	60	65	65	65	65
Bakhtiarpur-Bihar Light ..	18	28	28	33	33	33	33	33	33	33
Bankura-Damoodar River ..	..	..	..	..	..	..	..	..	43	60
Baraset-Basirhat Light ..	26	35	51	51	51	51	52	52	52	52
Barsi Light ..	79	79	79	116	116	116	116	117	117	117
Bengal and North Western ..	1,017	1,092	1,117	1,176	1,177	1,240	1,239	1,241	1,241	1,241
Bengal Doocars ..	153	153	153	153	153	153	153	153	153	153
Bezwada-Masulipatam *	49	52	52	52	52	52	52	52	52	52
Bowringpet-Kolar ..	..	..	..	..	..	11	(a)	(a)	(a)	(a)
Total	..	..	..	..	..	..	..	..	..	..

* Worked by a Company.

† Amalgamated with Bombay, Baroda and Central India Railway.
(a) Shown under Native State lines against Kolar District Railway.

† Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
<i>ASSISTED COMPANIES—contd.</i>										
Burdwan Katwa .. .. .	..	..	..	..	..	..	..	33	33	33
Champaner-Shivrajpur Pani Light ..	..	..	..	..	..	..	26	25	25	32
Darjeeling-Himalayan .. .. .	..	51	51	51	51	51	51	51	51	51
Extension .. .. .	..	..	..	..	..	..	..	95	95	95
Dasghara-Jamalpurgunj .. .. .	..	..	..	..	..	..	..	..	..	8
Delhi-Umballa-Kalka	162	162	192	192	192	192	192	192	206	206
Dchri-Rohas Light .. .. .	..	..	..	..	..	..	24	24	24	24
Deoghur .. .. .	..	5	5	†	†	..	†	†	†	†
Dhond-Baramati* .. .. .	..	..	..	..	..	..	27	27	27	27
Dibru-Sadiya	78	78	86	86	86	86	86	86	86	86
Ellichpur-Yeotmal* .. .. .	..	..	..	..	..	48	67	117	118	118
Godhra-Lunavada .. .. .	..	..	..	..	..	24	25	25	25	25
Hardwar-Dehra	32	32	32	32	32	32	32	32	32	32
Howrah-Amra	44	44	44	44	44	44	44	44	44	44
Howrah-Sheakhala	20	20	20	20	20	20	20	20	20	20
Jacobabad-Kashmor* .. .. .	..	..	..	..	..	..	77	77	77	77
Jessore-Jhenidah .. .. .	..	..	..	..	..	37	37	37	37	37
Jullundar Doab .. .. .	..	..	..	..	28	103	133	130	130	130
Jullundur-Mukerian* .. .. .	..	..	..	..	..	..	45	45	45	45
Kailghat-Falta .. .. .	..	..	..	..	..	..	..	..	..	25
Mandra-Bhaun* .. .. .	..	..	..	..	..	..	..	46	46	46
Matheran Light*	13	13	13	13	13	13	13	13	13	13
Mirpur Khas-Jhudo .. .. .	..	50	50	50	50	50	50	50	50	50
Mirpur Khas-Khadro* .. .. .	..	..	..	..	50	50	50	50	50	50
Mymensing-Bhairab Bazar .. .. .	..	..	..	..	..	..	..	81	81	88
Mymensingh-Jamalpur-Jagannathganj ..	54	54	55	55	55	55	55	54	56	56
Nadiad-Kapadvanj .. .. .	..	..	..	..	..	28	28	28	28	28
Phagwara-Rahon* .. .. .	..	..	..	..	..	..	..	26	26	45
Podanur Pallachi .. .. .	..	..	..	..	..	..	..	25	25	25
Powayen Light	40	40	40	40	40	40	40	40	39	39
Total .. .. .	..	..	..	..	..	..	..	..	..	..

* Worked by a Company.

† Amalgamated with East Indian Railway.

‡ These are the latest figures published in 1918.

† Mileage of Railway Lines in India open for Traffic at end of year—contd.

Railways.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
NATIVE STATE LINES—contd.										
Bhopal-Ujjain*	113	113	113	113	113	113	113	113	113	113
Bikaner ..	..	..	..	..	..	470	470	498	498	498
Bilimora-Kalamba*	..	..	..	..	..	..	26	26	26	35
Bina-Gaona-Baran*	..	146	146	146	146	146	146	146	146	147
Birur-Shimoga*	..	38	38	38	38	38	38	38	38	38
Bodoli-Chota Udaipur ..	..	..	..	..	..	..	..	..	..	..
Cooch-Behar ..	34	34	33	33	33	33	33	33	33	33
Cutch ..	36	36	37	37	37	37	37	37	37	37
Dholpur-Bari ..	20	20	20	20	20	28	37	37	37	36
Dhrangadra ..	21	21	21	21	21	21	40	43	43	43
Gackwar's Dabhol*	..	..	94	94	118	142	142	147	147	154
Gackwar's Mehsana*	..	138	138	138	138	138	153	153	163	163
Gondal-Portbandar ..	..	..	..	148	148	148	148	148	148	148
Gwalior Light*	203	250	250	250	250	250	250	250	250	250
Hindupur*	51	51	51	51	51	51	51	51	51	51
Hingoli Branch ..	..	..	..	..	..	50	50	50	50	50
Hyderabad-Godavari Valley*	391	391	391	391	391	391	391	391	391	391
Jaipur*	73	73	73	73	73	73	73	73	107	108
Jammu and Kashmir ..	..	..	16	16	16	16	16	16	16	16
Jamnagar ..	54	54	54	54	54	54	54	54	54	54
Jetalsar-Rajkot ..	..	46	46	46	46	46	46	46	46	46
Jind-Panipat *	..	..	..	..	..	..	..	..	..	26
Jodhpur-Bikaner ..	709	776	831	910	996	(b) 587	(b) 604	(b) 609	(b) 609	(b) 609
Junagad ..	..	..	..	89†	101	114	121	121	121	121
Khanpur-Chachran*	..	..	..	22	22	22	22	22	22	22
Khijadiya-Dhari *	..	..	..	..	..	26	26	26	37	37
Kolar District ..	..	..	..	..	..	..	11	41	64	64
Kolar Gold Fields*	..	10	10	10	10	10	10	10	10	10
Kolhapur*	29	29	29	29	29	29	29	29	29	29
Kosamba-Zankhvas ..	..	..	..	..	26	26	26	26	26	26
Ludhiana-Dhuri-Jakkhal ..	..	..	79	79	79	79	79	79	79	79

* Worked by a Company.

† Figures are the latest figures published in 1918.

† Formerly worked as part of the Bhavnagar-Gondal-Junagad-Portbandar Railway.
(b) Jodhpur only—figures of Bikaner have been shown separately.

† Mileage of Railway Lines in India open for Traffic at end of year—*contd.*

Railways.	1908.	1909.	1910.	1911.	1912.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
NATIVE STATE LINES— <i>contd.</i>										
Mohari-Barauli .. .. .	.. 93	.. 93	.. 93	.. 93	.. 93	.. 93	.. 93	.. 93	15	15
Morvi .. .. .	.. 32	.. 32	.. 32	.. 32	.. 32	.. 32	.. 32	.. 32	93	93
Mourbhani* .. .. .	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	32	32
Mysore-Arsikere .. .. .	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	..	103
Mysore-Nanjangud* .. .. .	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	.. 16	16	16
Nagda-Ujjain*	34	24	34	34	34	34	34	34	33	33
Nizam's*	330	330	330	330	330	330	330	330	330	330
Parlakimedi Light*	25	25	25	25	25	25	25	25	25	25
Petlad-Cambay*	34	34	34	34	34	34	34	34	34	34
Petlad-Vaso .. .. .	..	..	.. 19	.. 19	.. 25	.. 25	.. 25	.. 19	19	19
Pipar Bilara Light .. .. .	.. 37	.. 37	.. 37	.. 37	.. 37	.. 37	.. 37	.. 25	25	25
Rajpipla*	107	107	107	107	108	108	108	108	108	108
Rajpura-Bhatinda .. .. .	..	..	..	..	..	..	..	..	..	..
Sangli*	5	5	5	5	5	5	5	5	5	5
Secunderabad-Gadwal* .. .. .	.. 65	.. 65	.. 65	.. 65	.. 65	.. 65	.. 65	.. 46	103	103
Shoranur-Cochin* .. .. .	.. 65	.. 65	.. 65	.. 65	.. 65	.. 65	.. 65	.. 65	65	65
Tarikere-Narasimharajapur .. .. .	.. 58	.. 58	.. 58	.. 58	.. 58	.. 58	.. 58	.. 12	12	26
Tinnevely-Quilon* .. .. .	.. 67	.. 67	.. 67	.. 67	.. 67	.. 67	.. 67	.. 58	58	96
Udaipur-Chitorgarh .. .. .	.. 42	.. 42	.. 42	.. 42	.. 46	.. 46	.. 46	.. 67	67	67
Vijapur-Kalol-Kadi* .. .. .	.. 42	.. 42	.. 42	.. 42	.. 46	.. 46	.. 46	.. 46	46	46
Total	3,620	7,342	3,852	3,974	4,198	4,364	4,504	4,599	4,825	5,027
FOREIGN LINES.										
Karakkal-Poralam*	15	15	15	15	15	15	15	15	15	15
Pondicherry*	8	8	8	8	8	8	8	8	8	8
West of India Portuguese*	51	51	51	51	51	51	51	51	51	51
Total	74	74	74	74	74	74	74	74	74	74
Grand Total	30,576	31,490	32,099	32,839	33,484	34,656	35,285	35,833	36,286	36,334

* Worked by a Company.

† These are the latest figures published in 1918.

Irrigation.

In the West irrigation is a rare luxury, designed where it exists to increase the productivity of a soil sure of a certain crop under a copious and well distributed rainfall. In great parts of the East, and especially in India, it is a necessity to existence. For in India there are large tracts, such as the deserts of Sind and the South-West Punjab, which are practically rainless; there are others, such as the Deccan plateau, where cultivation is exceedingly precarious, owing to the irregularity of the rainfall and the long intervals when the crops may be exposed to a blazing sun and a desiccating wind; there are some crops, like rice and sugar-cane, which, except in a few highly favoured districts, can only be matured by the aid of irrigation. There are great areas where a single crop, which is called the *kharif*, or rain crop, can in normal years be raised by the unassisted rainfall, but where the second crop, the *rabi* or cold weather crop, is largely dependent on irrigation. Inasmuch as in India sixty-five per cent. of the population is still dependent upon agriculture for the means of livelihood, this brief summary indicates the enormous importance of irrigation to the community.

Its Early History.—It is natural, in such conditions, that irrigation in India should have been practised from time immemorial. In the history and imagery of the East, there is no figure more familiar than the well, with primitive means for raising the water, followed to-day much as they were in Bible days. In the early records of the peoples of India, dating back to many years before the Christian era, there are frequent references to the practice of irrigation. Wells have been in use from time immemorial; most of the innumerable tanks in Southern India have been in use for many generations; the practice of drawing off the flood waters of the Indus and its tributaries by means of small inundation canals has been followed from a very early date; and in the submontane districts of Northern India are still to be found the remains of ancient irrigation channels, which have been buried for centuries in the undergrowth of the forests. But in the direction of constructing large and scientific works for the utilisation of the surplus waters of the great river little was done before the advent of British rule, and they are comparatively of recent date.

The State Intervenes.—Irrigation works in India may be divided into three main heads—wells, tanks and canals. The greatest and the most impressive are the canals, and these may arrest attention first, because they constitute one of the most enduring monuments to British rule. They have in British India been constructed by direct State agency. In the early days of modern irrigation, certain works in the Madras Presidency were carried out by a guaranteed company, and the Orissa canal project was commenced through the same agency. Both Companies fell into difficulties, and the system into disfavour; during the Viceroyalty of Lord Lawrence it was decided that all irrigation works which promised a reasonable return on the capital expenditure should be constructed through direct agency and should be constructed by the State from loan funds as productive public works.

The British Inheritance.—The British Government in India inherited a few major irrigation works. One of these was the Grand Anicut—the local term for barrage—stretching across the width of the Cauvery River in Madras. In the Punjab there were a few canals, chiefly inundation—that is above the normal bed of the river and fed from the flood current—constructed by the Muhammedan and Sikh rulers, and owing to its proximity to Delhi, the waters of the Jumna were brought to the neighbourhood of the city by the Mughals. It is doubtful if these works ever irrigated any considerable areas or conferred much benefit on the people, but they suggested the model on which the British engineers worked. In Southern India, Sir Arthur Cotton constructed the upper Anicut across the Coleroon River, so as to secure the full level required for the utilisation of the Grand Anicut across the Cauvery. He also designed the works which, constructed and improved at an outlay of three crores, irrigate more than two million acres in the Godavari and Kistna deltas. In Northern India Sir Probyn Cautley constructed the great Ganges Canal, which takes off from the river near Hardwar, and which in magnitude and boldness of design has not been surpassed by any irrigation work in India or elsewhere. In this way were laid the foundations of the irrigation system in India. The work was gradually pushed forward. In Northern India a great system of canals was constructed, chiefly in the Punjab and the United Provinces. Some of these, like the great Chenab Canal, ought to be classed amongst the wonders of the world. It irrigates nearly two million acres, or about two-fifths of the cultivable area in Egypt, with an ordinary discharge of eleven thousand cubic feet per second, or about six times that of the Thames at Teddington. The Chenab and the Jhelum Canals brought under irrigation great areas of Government waste, and thereby allowed the system of State colonisation, which relieved the congestion on the older villages of the Punjab, and established colonies of over one million of people on what had been the desolate abode of a handful of nomads. In the Bombay Deccan a few protective works were constructed, like Lake Fife and Lake Whiting, drawing their supplies from the Ghats and spilling them over the arid tracts of the Deccan. In Madras there was completed the boldest and most imaginative irrigation work in the world; by the device of constructing a reservoir at Periyar, on the outer slopes of the ghats, and carrying the water by means of a tunnel through the intervening hill, the Madras Government turned the river back on its watershed and poured its waters over fertile lands starved by want of moisture. But these Deccan works did not pay. The cultivators would not use the water in years of good rainfall, and there was not enough to go far in seasons of drought; the inevitable result of such conditions was to concentrate attention upon the remunerative works on the rivers of the Punjab, and to leave protective irrigation to wilt for want of funds.

The Irrigation Commission.—In order to substitute policy for spasmodic effort, the Irrigation Commission was appointed by Lord Curzon's Government in 1901. It made a

detailed survey of the conditions of the country, and produced the report which is the foundation of Indian Irrigation policy to-day. The figures compiled by the Commission illustrate the progress which had been made up to that period. They showed that out of an area of 226 million acres annually under crop in the irrigating provinces of British India, in round numbers 44 million acres, or 19½ per cent. were ordinarily irrigated. Of the total area irrigated 18½ million acres or 42 per cent. was watered by State works (canals and tanks), and 25½ million acres, or 58 per cent. from private works, of which rather more than one half was from wells. During the previous quarter of a century the area irrigated by Government works had been increased by 8 million acres, or by eighty per cent. and the Commission estimated that during the same period the area under private irrigation had increased by at least three million acres or a total addition to the irrigated area in British India of 11 million acres or 33 per cent. Including the Native States the area under irrigation annually within the British Empire was placed at 53 million acres (19 million from canals, 16 million from wells, 10 million from tanks, and 8 million from other sources). The Commission reported that the field for the construction of new works of any magnitude on which the net revenue would exceed the interest charges was limited, being restricted to the Punjab, Sind and parts of Madras—tracts for the most part not liable to famine. They recommended that works of this class should be constructed as fast as possible, not only because they would be profitable investments, but also because they would increase the food supply of the country. Then addressing themselves to the question of famine protection, they worked out a very interesting equation. Taking the district of Sholapur, in the Bombay Deccan, perhaps the most famine-susceptible district in India, they calculated that the cost of famine relief in it was 5 lakhs of rupees a year. From this deduction, and making allowance for the advantage of famine avoidance as compared with famine relief, they said that the State was justified in protecting the land in such a district at a cost of 221 rupees per acre. For the general protection of the Bombay Deccan they recommended canals fed from storage lakes in the Ghats, where the rainfall has never been known to fail even in the driest years. For Madras they recommended the investigation of the old Tungabhadra project, and of a scheme for storage work on the Kistna. They proposed that Government should undertake the construction of protective works for the rice-growing districts of the Central Provinces and the Ken Canal project in Bundelkhand. The Commission further sketched out a rough programme of new major works to be constructed in different parts of India, which would cost not less than 44 crores of rupees and would result in an increase of 6,500,000 acres to the irrigated area. They estimated that the construction of these works would impose a permanent yearly burden of nearly 74 lakhs on the State, through the excess of interest charges on capital cost over the net revenue produced from the works. Against this would have to be set the reduction in the cost of future famines resulting from the construction of the works, which the Commission

put at 31 lakhs per annum. The balance of 43 lakhs would represent the net annual cost of the works to the State, or the price to be paid for the protection from famine which the works would afford, and for all other indirect advantages which might be attributed to them. The principal effect of the Irrigation Commission's report was to substitute policy for spasmodic effort, and the progress since made has been remarkable.

Irrigation Dues.—The charges for irrigation, whether taken in the form of enhanced land revenue or of occupiers' and owners' rates, vary very much, depending on the kind of crop, the quantity of water required for it and the time when it is required, the quality of the soil, the intensity or constancy of the demand, and the value of irrigation in increasing the outturn. In the immediate vicinity of Poona a rate of Rs. 50 an acre is paid for sugarcane. This is quite an exceptional rate, it obtains over only a limited area, and is made practicable only because the cultivators, by high manuring, can raise a crop valued at nearly eight-hundred rupees an acre. On other parts of the Mutha canal the rate varies from Rs. 40 to Rs. 12, and on other canals in the Bombay Deccan from Rs. 25 to Rs. 10 per acre. In Madras the maximum rate for sugarcane is Rs. 10, and in the Punjab it does not exceed Rs. 8-8. The rate charged for rice varies in Madras from Rs. 5 to 2, and in Bengal from Rs. 2-8 to Rs. 1-8 per acre. In both these provinces irrigation is practically confined to rice; in the Punjab, where this crop is not extensively grown, the rate varies from Rs. 7 to Rs. 3-4 per acre. The ordinary rate in the Punjab for wheat, which is the principal crop, varies from Rs. 4-4 to Rs. 3-12, and for fodder crops from Rs. 3 to 2-8 per acre. The average rate realised from major works for irrigation of all kinds is about Rs. 3-8 per acre, the provincial averages being Rs. 1-9 in Sind and Bengal; Rs. 3-4 in the Punjab; Rs. 4-8 in Madras, the United Provinces and the Bombay Deccan. The charges for irrigation may be taken as varying from 10 to 12 per cent. of the value of the crop, except in Bengal and the Bombay Deccan, where the average is little more than six per cent.

Canals and Navigation.—Twenty years ago a great deal was heard about the desirability of constructing navigation canals, either in conjunction with irrigation or for transport, pure and simple. The idea is now exploded. It received a certain stimulus from the unprofitable character of Indian railways, and the handsome earnings of the irrigation works; it received its quietus when the railways turned the corner. Broadly speaking it may be said that navigation and irrigation rights clash; navigation is not only costly, but it cannot be maintained during the season of short supply, except to the detriment of irrigation. Outside the deltaic tracts of Bengal, Orissa, Madras and Sind, navigable canals will never be of much use for the purpose of inland navigation. There is however considerable scope for connecting canals to improve the facilities for navigation on the great river system of Eastern Bengal. This is a question which is now engaging the attention of the Government.

IRRIGATION DURING 1917-18.

The purpose of artificial irrigation is to supplement the rainfall on which the welfare and prosperity of India so largely depends, and consequently the demand for canal irrigation fluctuates considerably with the nature of the monsoon and the intensity of the winter rains. When the rainfall is copious and well distributed there is little demand for artificial irrigation, but, in the event of a failure either of the monsoon or of the winter rains, the canals are taxed to their utmost capacity and the officers responsible are then faced with the difficult task of allotting the available supplies in the most equitable manner, so as to provide for the irrigation of as large an area as possible. These difficulties had not, however, to be faced during the year 1917-18, for the monsoon of 1917 was most propitious and the rainfall abundant, especially during the month of September, which is the most critical period of the agricultural year. During the monsoon period from June to September 1917, the total rainfall in the plains of India was, as a whole, some 17 per cent. in excess of normal, this being the highest excess ever recorded.

The monsoon rainfall of 1917 was thus remarkable for its unusual abundance, especially in north-west and central India, and for the absence of any extensive break, and consequently the areas irrigated by the Government canals were considerably restricted, the heavy and late rainfall permitting the winter crops to be sown largely without the aid of canal water.

Total area irrigated.—During the year the total area irrigated by all classes of works in India, excluding the areas irrigated in the Native States, amounted to nearly 26 million acres or about 40,625 square miles. Towards this area the Productive Works contributed 16,922,000 acres, the Protective Works 97,000 acres, and the Minor Works 8,477,000 acres.

Productive Works.—The area irrigated by productive Works was greatest in the Punjab, here over 7½ million acres were recorded. The Madras Presidency came next with an area of 3½ million acres, while in the United Provinces and Sind, the areas irrigated by the productive Canals amounted to 2,871,000 acres and 1,364,000 acres, respectively. Bihar and Orissa contributed 798,000 acres, the North-West Frontier Province 362,000 acres, and Burma 14,000 acres.

The total capital outlay, direct and indirect, at the end of the year on Productive Irrigation Works, including those under construction, amounted to nearly 57½ crores. The gross revenue for the year amounted to 701½ lakhs and the working expenses to nearly 216½ lakhs. The net revenue was therefore a little over 485 lakhs which represents a return of 8·40 per cent. on the total capital outlay. This figure indicates the remunerative character of the productive Irrigation Works of India, especially when it is considered that this percentage presents only receipts from water rates and a share of enhanced land revenue, and that no credit is given for the large additional revenues, due directly to the opening up of new tracts by irrigation, which are obtained from the railways and under such heads as stamps,

postage, salt, etc. In the several Presidencies and provinces the return on capital outlay was highest in the Punjab where the canals yielded 11·95 per cent. In Madras, including schemes which have proved unremunerative the percentage of return was 9·95 while in the United Provinces and Sind returns of 8·62 and 6·03 per cent. respectively were realized.

Protective Works.—The total area irrigated by the thirty-six Protective Works in operation amounted to 497,000 acres. Towards this the United Provinces contributed nearly 200,000 acres and Madras nearly 107,000 acres. In the Deccan and Gujarat nearly 70,000 acres were irrigated. In the two other provinces where Protective Works are in operation, 66,000 acres were irrigated in Bihar and Orissa and 54,000 acres in the Central Provinces.

The total capital outlay on works of this class amounted to over 1,012½ lakhs. The net revenue for the year was only a little over one lakh, which is equivalent to 0·10 per cent. on the total capital outlay. This low return is partly due to the fact that the capital account is at present swelled by expenditure on works under construction which have not yet commenced to earn revenue. Many useful and important works of this nature are under construction in Bombay, the United Provinces and the Central Provinces, while in the last named province seven tank schemes, aggregating over 40 lakhs, are in progress. Details of these works will be found in the chapters in Part II of this Review relating to the progress of irrigation in the Province or Administration concerned.

Minor Works are of two kinds. These works are, for purposes of accounting, subdivided into three classes as described below:—

Class I.—Works for which Capital and Revenue Accounts are kept. These are works the estimated capital cost of which exceeds Rs. 50,000 and the revenue from which is expected to cover the total working expenses.

Class II.—Works for which only Revenue Accounts are kept. These are generally works costing less than Rs. 50,000.

Class III.—Works for which neither Capital nor Revenue Accounts are kept. The works of this class consist mainly of small tanks and field embankments, or small drainage schemes to prevent deterioration of land or to effect improvement of land with a view to rendering it fit for cultivation.

121 Minor Works of the first class described above were in operation, 113 being irrigation works and 8 navigation works, the area irrigated by the former amounting to 2,262,000 acres. The total capital outlay on irrigation work of this class at the close of the year was nearly

448 lakhs, and the net revenue amounted to Rs. 35,29,000, representing a return of 7·88 per cent. on capital. On the eighth purely navigation works referred to above, the total capital outlay at the end of 1917-18 amounted to nearly 231 lakhs, a return of 0·42 per cent. being realized. The net revenue realized during 1917-18 from Class I Irrigation and Navigation Works as a whole yielded a return of 5·34 per

cent. on a total capital outlay of about 678½ lakhs. An area of 2,796,000 acres was irrigated by Minor works of Class II while the Class III works effected irrigation to the extent of 3,419,000 acres. The total area irrigated by Minor works of all classes thus amounted to 8,477,000, or just one-third of the total area irrigated during the year by Government canals.

Total cropped area.—A comparison of the acreage of crops matured during 1917-18 by means of Government irrigation systems, with the total area under cultivation in the several provinces is given below :—

Provinces.	Net area cropped.	Area irrigated by Government Irrigation Works.	Percentage of irrigated area to total cropped area.	Capital cost of Government Irrigation Works to end of 1917-18 in lakhs of rupees.	Estimated value of crops raised on areas receiving State irrigation in lakhs of rupees.
	Acres.	Acres.		Rs.	Rs.
Burma	14,668,000	1,448,000	9·9	278	442
Bengal	24,452,000	113,000	0·9	249	57
Bihar and Orissa ..	8,131,000	866,000	1·0	629	395
United Provinces of Agra and Oudh.	35,808,000	3,209,000	9·0	1,259	1,768
Ajmer-Merwara ..	365,000	19,000	5·2	35	7
Punjab	28,253,000	8,600,000	30·4	2,239	3,337
North-West Frontier Province.	2,958,000	362,000	12·2	273	180
Sind	4,000,000	3,507,000	87·7	328	838
Bombay Deccan ..	25,705,000	305,000	1·2	506	242
Central Provinces, (excluding Berar).	19,290,000	145,000	0·8	327	60
Madras	38,821,000	7,359,000	19·0	1,114	2,466
Baluchistan	257,000	17,000	6·6	42	5
Total	202,708,000	25,950,000	12·8	7,279	9,797

It will be seen that nearly 13 per cent. of the cropped area is irrigated by Government irrigation works, and that the estimated value of the crops so irrigated in a single year exceeds by 35 per cent. the total capital expended on these works.

Comparisons.—The following table compares the area irrigated by Government works with the average area so irrigated during the previous triennium :—

Comparisons.

227

Province.	PRODUCTIVE.		PROTECTIVE.		MINOR.		TOTAL.	
	1914-15 to 1916-17.	1917-18.	1914-15 to 1916-17.	1917-18.	1914-15 to 1916-17.	1917-18.	1914-15 to 1916-17.	1917-18.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Madras	3,454,548	3,526,831	107,111	106,866	3,717,524	3,725,132	7,279,183	7,358,829
Bombay Deccan	31,870	43,691	76,751	69,970	173,668	190,962	282,289	304,623
Sind	1,421,125	1,363,789	..	..	2,230,131	2,143,329	3,651,256	3,507,118
Bengal	82,595	86,786	..	..	25,295	26,439	107,890	113,225
United Provinces	2,815,245	2,871,087	172,259	199,831	153,612	138,507	3,141,116	3,209,425
Punjab	7,522,509	7,531,316	..	..	987,639	1,068,842	8,510,148	8,600,158
Bihar and Orissa	845,311	798,068	59,907	65,971	1,447	1,727	906,665	865,766
Burma	268,962	263,656	..	..	1,029,923	1,184,248	1,298,885	1,447,904
Central Provinces	29,541	74,794	32,076	54,324	17,091	16,333	78,708	145,451
North-West Frontier Province	295,679	362,000	..	..	2,500	..	298,179	362,000
Rajputana .. .. .	..	..	..	..	25,255	19,129	25,255	9,129
Baluchistan .. .. .	..	..	..	..	6,540	16,846	6,540	16,846
TOTAL ..	16,767,385	16,922,018	448,104	496,962	8,370,825	8,531,494	25,586,114	25,950,471

Canal Colonies.—One of the most interesting developments is the Canal Colonies of the Punjab. In the early eighties the drier districts and waste lands began to receive attention. The Lower Sohag and Para Canals, which take out from the right bank of the Sutlej opposite Fazilka, and the Sidhnai on the left bank of the Ravi above its junction with the Chenab, were constructed between 1883 and 1887 and, besides being immediately successful, they afforded valuable experience in colonization. The Sidhnai Canal, to which the supply is ensured by a needle dam across the river, irrigates some 350,000 acres annually and gives a net return of between 30 and 40 per cent. upon a capital outlay of rather more than 13 lakhs of rupees. The Lower Chenab Canal, for the irrigation of the lower portion of the tract lying between the Chenab and the Ravi rivers, was opened as an inundation canal in 1887, but from the outset it suffered from deposits of silt, and it was realized that without a weir across the river at its head, to ensure its supply, it would be a complete failure. As soon as the supply was assured by the weir, Colonel Jacob, R. E., pressed for the extension of the canal into the large areas of crown waste which were till then lying practically valueless. This extension was sanctioned in 1891 and the colonization of the waste lands then commenced. The Lower Chenab Canal is easily the most productive work in India. It irrigates about 2½ million acres annually and in the year under review produced a net revenue of 128 lakhs of rupees on a capital outlay of 325 lakhs, a return of nearly 40 per cent. The accumulated surplus revenues of this canal, after paying interest charges, amount to no less than 1,388 lakhs of rupees.

Lower Jhelum Canal, 1898-1902.—The Lower Jhelum Canal project was sanctioned in 1888, but work on it was postponed for want of funds till the Lower Chenab Canal had made considerable progress and it was not until 1898 that the work was taken up in earnest. It was opened for irrigation in 1902, although construction was not quite completed.

In the case of both the Lower Chenab and Lower Jhelum Canals, construction and irrigation went on side by side, since the tract being dry and inhospitable, the canals had themselves to bring water for the construction of the masonry works. The canal commands the lower portion of the tract between the Chenab and the Jhelum, and is another extremely lucrative work, irrigating about 800,000 acres annually, and returning over 20 per cent. on an outlay of 162 lakhs of rupees.

The Triple Project.—The Triple Canal Project was commenced in 1905; of its three component parts, the Upper Chenab Canal was opened in 1912, the Lower Bari Doab Canal in 1913, and the Upper Jhelum Canal in 1915. A reference to the map will show that the four rivers, Jhelum, Chenab, Ravi and Sutlej, flow convergingly in a south-westerly direction, the first named being the most northerly. The particular problem confronting the Punjab engineers was the irrigation of the tract between the Sutlej and the Ravi, and since the supply of the latter river was required in its entirety for the existing Upper Bari Doab and Sidhnai canals, a canal from the Sutlej naturally offered the easiest solution. A project for the irrigation of the lower Bari Doab from the Sutlej

was prepared, but, as the result of representations made by Colonel Jacob and Sir J. Wilson, the Irrigation Commission of 1901-02 advised the consideration, in preference to it, of a project to irrigate the Doab by water brought from the river Jhelum across the rivers Chenab and Ravi. Under this project water is carried by the Upper Jhelum Canal from Mangla on the river Jhelum to a point above Khanki, the headworks of the existing Lower Chenab Canal, on the Chenab. This renders it possible, without interference with existing irrigation, to draw off water from the Chenab at Merala, forty miles above Khanki, and to convey it by the Upper Chenab canal to the Ravi at Balloki, crossing the latter river by means of the Balloki level crossing. The water is thus delivered on to the Ravi-Sutlej tract for irrigation by the Lower Bari Doab Canal.

The Frontier.—Equally remarkable results have been achieved on the Frontier. The introduction of irrigation by the Lower Swat Canal has changed completely the character of the tract served. Before the advent of the canal it was uninhabited and practically uninhabitable, covered with thorn bushes and not a tree to be seen. It is now, and was even in 1894, when the completion report was written, dotted throughout with villages occupied by a law-abiding and contented peasantry, and the wilderness of thorn has given place to a vast sheet of cultivation, while avenues of trees have sprung up along the roads as well as along the canal and its distributing channels. The state of the tract is in every way a vast contrast to what it was when the surveys for the canal were in progress, at which time no officer was allowed to leave cantonments without himself being armed and being attended by an armed escort.

Indian Soldier Colony.—An area of 171,500 acres has been reserved in the Lower Bari Doab colony for distribution to Indian officers, non-commissioned officers and soldiers who rendered distinguished service in the great war, and the distribution is being made under the orders of the Commander-in-Chief through the agency of the Indian Soldiers' Board on the recommendations of Officers Commanding units who were informed some months ago of the number of reward grants allocated to their units and requested to submit lists of names as soon as possible. These lists when received are forwarded to the Colonization Officer for scrutiny with a view to the substitution of Jangi Inams or cash annuities for land grants in cases where the nominees do not conform to the conditions for which the Punjab Government stipulated in reserving the land. Up to the present, lists of recommendations for about 22,000 acres have been scrutinised by the Colonization Officer and a tentative arrangement has been made for the allotment of villages to soldiers named in the lists, the object held in view being to constitute villages so far as possible of men of the same regiment, caste and district of origin. It is hoped that it will be possible to allot a very considerable proportion of the area reserved in time for Aharis of this year but up-to-date only three grantees have actually been put in possession of their land. Two of these are Indian Officers of the Army Remount Depot with records of the highest distinction and the third is Sergeant-Major Gur-Bachan Singh, late of the 54th Battalion of the Australian Imperial Forces, who had a remarkable career.

WELLS AND TANKS.

So far we have dealt only with the great irrigation schemes. They are essentially exotic, the products of British rule; the real eastern instrument is the well. The most recent figures give thirty per cent. of the irrigated area in India as being under wells. Moreover the well is an extremely efficient instrument of irrigation. When the cultivator has to raise every drop of water which he uses from a varying depth, he is more careful in the use of it; well water exerts at least three times as much duty as canal water. Again, owing to the cost of lifting, it is generally used for high grade crops. It is estimated that well-irrigated lands produce at least one-third more than canal-watered lands. Although the huge areas brought under cultivation by a single canal scheme tend to reduce the disproportion between the two systems, it must be remembered that the spread of canals increases the possibilities of well irrigation by adding, through seepage, to the store of subsoil water and raising the level.

Varieties of Wells.—Wells in India are of every description. They may be just holes in the ground, sunk to subsoil level, used to a year or two and then allowed to fall into decay. These are temporary or *kacha* wells or they may be lined with timber, or with brick or stone. They vary from the *kacha* well costing a few rupees to the masonry well, which will run into thousands, or in the sandy wastes of Bikanir, where the water level is three hundred feet below the surface, to still more. The means of raising the water vary in equal degree. There is the *picottah*, or weighted lever, raising a bucket at the end of a pivoted pole, just as is done on the banks of the Nile. This is rarely used for lifts beyond fifteen feet. For greater lifts bullock power is invariably used. This is generally harnessed to the *mot*, or leather bag, which is passed over a pulley overhanging the well, then raised by bullocks who walk down a ramp of a length approximating to the depth of the well. Sometimes the *mot* is just a leather bag, more often it is a self-acting arrangement, which discharges the water into a sump automatically on reaching the surface. By this means from thirty to forty gallons of water are raised at a time, and in its simplicity, and the ease with which the apparatus can be constructed and repaired by village labour, the *mot* is unsurpassed in efficiency. There is also the Persian wheel, an endless chain of earthenware

pots running round a wheel. Recently attempts have been made, particularly in Madras, to substitute mechanical power, furnished by oil engines, for the bullock. This has been found economical where the water supply is sufficiently large, especially where two or three wells can be linked. Government have systematically encouraged well irrigation by advancing funds for the purpose and exempting wellwatered lands from extra assessment due to improvement. These advances, termed *takavi*, are freely made to approved applicants, the general rate of interest being $6\frac{1}{2}$ per cent. In Madras and Bombay ryots who construct wells, or other works of agricultural improvement, are exempt from enhanced assessment on that account. In other provinces the exemption lasts for specific periods, the term generally being long enough to recoup the owner the capital sunk.

Tanks.—Next to the well, the indigenous instrument of irrigation is the tank. The village or the roadside tank is one of the most conspicuous features in the Indian scene. The Indian tank may be any size. It may vary from a great work like Lakes Fife and Whiting in the Bombay Presidency or the Periyar Lake in Travancore, holding up from four to seven billion cubic feet of water, and spreading their waters through great chains of canal, to the little village tank irrigating ten acres. They date back to a very early stage in Indian civilisation. Some of these works in Madras are of great size, holding from three to four billion cubic feet, with water spreads of nine miles. The inscriptions of two large tanks in the Chingleput district of Madras, which still irrigate from two to four thousand acres are said to be over 1,100 years old. Tank irrigation is practically unknown in the Punjab and in Sind, but it is found in some form or other in all other provinces, including Burma, and finds its highest development in Madras. In the ryotwari tracts of Bombay and Madras all but the smallest tanks are controlled by Government. In the zemindari tracts only the large tanks are State works. According to the latest figures the area irrigated from tanks is about eight million acres, but in many cases the supply is extremely precarious. So far from tanks being a refuge in famine they are often quite useless inasmuch as the rainfall does not suffice to fill them and they remain dry throughout the season.

BUILDINGS AND ROADS.

The Buildings and Roads branch of the Public Works Department embraces all the operations of the Department which are not classed under the special heads of Railways and Irrigation. It includes the extension and maintenance of the road system, the construction and repair of all the buildings required for the proper discharge of the functions of government in all its branches, and a large miscellaneous class of works of public improvement, including lighthouses, harbours, embankments, boat bridges, and ferries, and the water supply and sanitation of towns.

The operations of this branch of the Department are classed primarily under the head of Civil Works, the expenditure on which is chiefly met from provincial resources. The classification of this expenditure for 1914-15 under the various heads is shown in the following table:—

	Central Pro- vinces and Berar.	Burma.	Assam.	Bengal.	Bihar and Orissa.	United Pro- vinces of Agra and Oudh.	Punjab.	North- West Frontier Pro- vince.	Madras.	Bombay.	India General.	Total.
	£	£	£	£	£	£	£	£	£	£	£	£
Imperial	72,050	49,661	2,533	89,409	26,255	74,920	37,148	208,198	36,842	80,536	230,674	908,226
Provincial*	529,551	775,734	364,270	831,581	664,327	507,741	610,853	..	1,086,986	756,747	..	6,127,790
Total	601,601	825,395	366,803	920,990	690,582	582,661	648,001	208,198	1,123,828	837,283	230,674	7,036,016
Expenditure by Civil Officers from Imperial Funds .. £ 52,995												
Expenditure in England £ 87,739												
Grand Total £ 7,176,750												

* Includes expenditure by the Civil Department in addition to that by the Public Works Department.

The extension of local Government in India has thrown a large portion of the smaller class of public works into the hands of the local Boards. Speaking generally, the boards maintain their own establishments, but in the case of any works of unusual difficulty they have recourse to the professional skill of the Public Works Officers.

The School of Oriental Studies.

This School was established by Royal Charter in June 1916. The purposes of the School (as set out in the Charter) are to be a School of Oriental Studies in the University of London to give instruction in the languages of Eastern and African peoples, Ancient and Modern, and in the Literature, History, Religion, and Customs of those peoples, especially with a view to the needs of persons about to proceed to the East or to Africa for the pursuit of study and research, commerce or a profession, and to do all or any of such other things as the Governing Body of the School consider conducive or incidental thereto, having regard to the provision for those purposes which already exists elsewhere and in particular to the co-ordination of the work of the School with that of similar institutions both in this country and in our Eastern and African Dominions and with the work of the University of London and its other Schools.

The aims of the School may be summarized briefly as follows: (i) To provide a great University centre for Oriental and African studies and research; (ii) to provide training in Languages, Literature, History, Religions, and Customs, for military and civil officers of Government and for any other persons about to proceed to Africa and the East for commercial or other enterprises.

The School has been created as the outcome of the Reports of two Government Committees, the first a Treasury Departmental Committee presided over by Lord Reay, the second an India Office Departmental Committee presided over by Lord Cromer. The School is intended to provide London with a centre for Oriental teaching adequate to the needs of the metropolis and of the Empire, and one that will remove the reproach that London has hitherto been without an Oriental School comparable to these of Paris, Berlin, and Petrograd.

The initial scheme of teaching of Modern Oriental Languages recommended by Lord Reay's Committee for the School is as follows:

Group I.—NEAR EAST: *Turkish, Arabic and Persian*.—One Professor, two Readers, three Native Assistants.

Group II.—NORTHERN AND EASTERN INDIA: *Hindi and Hindustani and Bengali*.—One Professor, one Reader, two Native Assistants.

Group III.—WESTERN INDIA: *Marathi and Gujarati*.—One Professor, one Reader (or two Readers), two Native Assistants.

Group IV.—SOUTHERN INDIA: *Tamil and Telugu and Kanarese*.—One Professor one Reader, three Native Assistants.

Group V.—FURTHER INDIA, MALAY ARCHIPELAGO, ETC. *Burmese*.—One Reader, one Native Assistant. *Malay*.—One Reader, one Native Assistant.

Group VI.—FAR EAST: *Chinese*.—One Professor, one Native Assistant. *Japanese*.—One Professor, one Native Assistant.

Group VII.—AFRICA: *Swahili*.—One Reader, one Native Assistant. *Hausa*.—One Reader, one Native Assistant.

The Reay Committee further recommended that £1,000 a year should be spent in teaching the following languages or groups of languages, Armenian, Assamese, Panjabi, Tibetan, Pashto, Sinhalese, Siamese, Melanesian languages, Polynesian languages, Amharic, Luganda, Somali, Yoruba, Zulu. The Committee also recommended that provision should be made in the School for the teaching of classical Oriental studies, e.g., Sanskrit and Pali. Not only the languages, but the history, customs, and religions of the peoples who speaks them will be taught in the School.

The Governing Body are negotiating with the University of London for the transfer to the School of the Oriental teaching hitherto provided at University and King's Colleges.

The School possesses noble and adequate buildings, provided for them by Government under the London Institution (Transfer) Act of 1912. The sum of £25,000 required for the alteration and extension of the buildings of the London Institution for the purposes of the School was voted by Parliament. The School buildings are quiet, although they are in the heart of the City. They are only two minutes' walk from the termini of the Great Eastern and Central London Railways and from Moorgate Street Station on the Metropolitan Railway, and about six minutes' walk from the Bank of England. The School was formally opened by the King on 23rd February, 1917, and the first Bulletin of the School (price 6s.) was published later in the year.

Finances.—An appeal for an endowment fund was issued in October, 1916, which states that The Berlin School of Oriental Languages had, before the War, an income of £10,000; the income required for the School in London of which the scope is necessarily more extended, is £14,000. Of this sum the School has at present in view an income of about £7,500, including grants from the Imperial Government and the Government of India. The Committee desire to raise an Endowment Fund of £150,000 for this purpose, towards which they have as a result of a preliminary appeal (which was suspended in August, 1914), about £10,000.

Patron, H. M. the King. Chairman of the Governing Body, Sir John Hewett. Honorary Secretary, P. J. Hartog, Esq., C.I.E.

Trade.

The broad characteristics of the trade of India are familiar to readers of the Indian Year Book. India is chiefly an agricultural country, for seventy-two per cent. of its people are directly dependent on agriculture for their means of livelihood. Consequently the prosperity of the country is largely determined by the character of the monsoon rains. An area which grows larger every year is protected by irrigation, and the extension of these works, with the increased resisting power of the people and the growth of manufacturing industry, is expected to make the people immune from the shock of such famines as those of 1896-97 and 1899-1900. That this faith is well founded is proved by the remarkable strength with which the population have just withstood the acute failure of crops, almost throughout the land, in 1918-19, coming as it did after the country had largely been drained of supplies for the armies and the Allied nations. But many of the irrigation works, such as tanks and wells, depend on the rains, for their replenishment. Consequently the trade of the year is mainly determined by the rains, which decide the export trade and the con-

sequent purchasing power of the people. Another feature which arises from these conditions is that the imports are mainly of manufactured goods and the exports of produce. The imports of manufactures in pre-war days chiefly came from the United Kingdom, whose exporting power was seriously diminished by the diversion of the energies of the people to the war, and has for the time been still further impaired by the industrial confusion in Great Britain following the war. A large part of the export in pre-war days went to the Continent of Europe, and that market was closed by the war. It has not yet been re-opened in a practical sense, but on the other hand a large increase of trade, both import and export, with the United States has taken place. Trade during the past year has also greatly been affected by the famine following the failure of the 1918 monsoon. The main conclusions to be drawn from trade statistics and movements of the past year are indicated in the annual review of Indian trade by the Director of Statistics, Mr. G. Findlay Shirras, from which the following article is mainly drawn.

THE TRADE OF THE YEAR.

From the trade viewpoint the year ending 31st March 1919 was an annus mirabilis. In none of the previous forty-four Reviews was it necessary to chronicle so many events all crowded into the space of a twelvemonth. The year opened with unusual vigour in the production of munitions and in the export of commodities of national importance. A silver crisis, a rise in exchange, a failure of the monsoon over wide areas, a virulent epidemic of influenza, responsible, it is estimated, for a deathroll of six millions, and the Armistice illustrate, if illustration were necessary, the unique diversity of the year. "The current year," said Sir James Meston in presenting the Financial Statement in the Legislative Council last March, has been a period of crisis and dramatic change. "The first half of it was marked by great manufacturing energy, high prices, and a great deal of diffused prosperity. When the year opened, the long-threatened German offensive was developing in France, and India was called upon to redouble her efforts to provide men and munitions of war. Then came the cessation of hostilities and the scene completely changed. Military activities could not of course be curtailed all at once, but private trade was very suddenly checked. Astute merchants who had been gambling on protracted fighting and a continuing rise in prices found their calculations upset and Nemesis descended upon much unhealthy speculation, especially in the cloth and share markets of Bombay. By this time also it had unfortunately become evident that considerable areas in Bombay, the United Provinces, and other parts of India would be unable to share in the general rejoicings about peace; for the monsoon had failed badly, scarcity was imminent, and at

the most critical time a fierce epidemic of influenza attacked the whole country, took a very heavy toll of the rural masses, and seriously weakened the agricultural labour power." The value of the overseas trade in merchandise was nearly Rs. 423 crores (£ 232 millions*) as against Rs. 393 crores (£ 262 millions*) in the preceding year and Rs. 370 crores (£ 247 millions) the pre-war average. The year's imports of merchandise, as compared with those of its immediate predecessor, recorded an increase in value of 12 per cent., exports of 2 per cent., and re-exports of 60 per cent. As against the pre-war quinquennium, imports increased in value by 16 per cent., exports by 9 per cent., and re-exports by as much as 215 per cent. The decrease in the imports of treasure on private account was mainly due to the shutting off of the imports of gold. On Government account the net imports of treasure considerably increased, due to large imports of silver from the United States under the Pittman Act.

The rise in prices accounted for a part, in some cases a very large part, of the increase in the value of the imports and export of commodities. In order to remove any doubts arising from these figures, it is necessary to calculate how much of the increase or decrease in the value of the imports and exports of each article was due to a rise or fall in price. The quantity of each article imported and exported during the year has, as far as practicable, been valued at the prices prevailing in 1917-18. According to the ordinary trade returns, the imports of merchandise in 1918-19 were valued at Rs. 169 crores, an increase of nearly Rs. 19 crores over 1917-18; but when

* Note.—The conversion rate (Rs. 15=£) has been retained to facilitate comparisons although the rate of sterling exchange has been above 1s. 4d. The average rate of exchange during 1918-19 was 1s.—5'544d. per rupee.

the prices of the latter year are applied, the value is reduced to Rs. 140 crores, thus showing an increase in the import trade on account of higher prices of Rs. 29 crores or 20 per cent. If quantity is taken, by comparing the value of the year's trade re-calculated at prices of 1917-18, with the actual value of the trade in 1917-18, the figures show a decrease of over Rs. 10 crores or 6 per cent. in the volume of the import trade. In regard to exports, the actual declared value in 1918-19 was Rs. 239

crores, while the value calculated at the prices of the preceding year was Rs. 196 crores, or, in other words, there was an increase of Rs. 43 crores or 22 per cent. on account of higher prices. The volume of the exports showed a decrease of Rs. 37 crores or 16 per cent. These comparisons, it is unnecessary to emphasise, are with the preceding year, 1917-18, and in the case of exports the comparative failure of the monsoon is unmistakably evident.

Value of Trade.—The declared value of the trade as compared with the previous year and the pre-war quinquennium was as follows:—

Imports and exports of Private Merchandise and of treasure on private account.

PRIVATE MERCHANDISE.	Average of five years 1909-10 to 1913-14. (pre-war average.)	Average of five years 1914-15 to 1918-19 (war average)	1917-18.	1918-19.	Increase (+) or decrease (—) in 1918-19 as compared with the pre-war average.
Imports of Merchandise ..	Rs. 1,45,84,72,000	Rs. 1,47,80,19,000	Rs. 1,50,42,51,000	Rs. 1,69,03,41,000	(per cent.) + 16
Exports of Indian Merchandise ..	2,19,49,73,000	2,15,96,70,000	2,33,43,45,000	2,33,30,76,000	+ 9
Re-exports of Foreign Merchandise ..	4,61,88,000	8,14,15,000	9,12,10,000	14,55,68,000	+ 215
Total private Merchandise.	3,69,96,33,000	3,71,91,04,000	3,92,98,06,000	4,22,89,85,000	+ 14
NET IMPORTS OF TREASURE (PRIVATE).					
Gold (net imports)	28,86,34,000	7,60,76,000	19,93,86,000	(a)-2,48,44,000	—
Silver—					
Imports ..	10,88,25,000	4,56,21,000	2,37,84,000	1,19,47,000	— 89
Exports ..	3,67,34,000	1,76,79,000	1,69,32,000	17,76,000	— 95
„ (net imports)	7,20,91,000	2,79,42,000	68,52,000	1,01,71,000	— 86
Total treasure (net imports).	33,07,25,000	10,40,18,000	20,62,38,000	(a)-1,46,73,000	—

Stores and treasure imported or exported on Government account are excluded from the above table. The values of articles of national importance exported on Government account are however included under private exports

shown above. In view of the large increase in the imports and exports of Government stores, and in the imports of silver on Government account in 1918-19, it may be of interest to set out the figures:—

Imports and exports of Government stores and of treasure on Government account.

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
	Rs.	Rs.	Rs.
Imports of Merchandise	5,82,28,000	13,92,97,000	19,52,83,000
Exports of Indian Merchandise	5,46,000	2,21,72,000	1,24,21,000
Re-exports of Foreign Merchandise	5,83,000	12,21,000	18,60,000
Total Stores ..	5,93,57,000	16,26,90,000	20,95,64,000
NET IMPORTS OF TREASURE (ON GOVERNMENT ACCOUNT).			
Gold (net imports)	—71,49,000(a)	5,24,00,000	(a)—3,07,94,000
Silver—			
Imports	3,53,09,000	20,29,10,000	67,89,45,000
Exports	1,12,000	1,93,44,000	99,26,000
„ (net imports)	3,51,97,000	18,35,66,000	66,90,19,000
Total treasure (net imports)	2,80,48,000	23,59,66,000	63,82,25,000

Net exports.

Important Changes.—The total value of the exports of jute manufactures in 1918-19 was a record figure—£ 35 millions, as against £ 13 millions in the pre-war period; tea was valued at £ 12 millions as against £ 9 millions, and tanned hides at £ 5 millions as against £ 1 million. There was, however, a decrease in the export of food-grains from £ 30 millions to £ 27 millions. The most noticeable changes, as compared with the pre-war year 1913-14, were the increases in the imports of copra, fuel oil, coconut oil, tea, and cigarettes, and

the decreases in cotton goods, railway plant and rolling-stock woollen goods, provisions, metals, motor cars, coal-tar-dyes, kerosine oil, salt, sugar beer, umbrellas, boots and shoes, cement, candles, and sulphuric acid. Under exports there were important increases in jute manufactures, tanned cow hides, rubber, coconut oil, linseed oil, cigarettes, chromite, gram, indigo, and cotton piece goods, while raw cotton, raw jute, oil seeds, coal, raw hides, oilcake, pig iron, wheat and zinc decreased.

Prices.—The average prices of 61 articles of imports based on the declared values increased 27 per cent. over the preceding year, while the average prices of 50 articles of export rose 20 per cent. The increase in average prices in respect of these articles of import and export as compared with the pre-war year was as follows :—

—	1913-14.	1915-16.	1916-17.	1917-18.	1918-19.
Imports	100	126	170	211	268
Exports	100	103	117	125	150

At the end of March 1919, as compared with the corresponding period of 1918, rapeseed showed a rise of no less than 97 per cent., sesamum of 81 per cent., linseed of 61 per cent., food-grains of 56 per cent. (mainly bajra 75 per cent., jawar 69 per cent., rice and gram 55 per cent. each, wheat 34 per cent. and barley 32 per cent.), and raw jute of 32 per cent. As compared with the level of prices of March 1914, raw cotton showed an increase of 109 per cent., sesamum of 78 per cent. and food-grains of 73 per cent. (mainly jawar 129 per cent., bajra 120 per cent., wheat 73 per cent., gram 65 per cent. and rice 36 per cent.), while raw jute decreased by 27 per cent. The index number of wholesale prices in Calcutta at the end of March 1919 was 2 per cent. above the level of March 1918, and 80 per cent. above that at the outbreak of war (end of July 1914). The rise, as compared with the pre-war period, was due to an increase in the prices of imported articles, such as salt, sugar, cotton manufactures, metals, and kerosene oil, and also in some degree to indigo, shellac, raw cotton, and food-grains. Retail prices of the articles of food at the end of March 1919 were 59 per cent.

above the level of prices which ruled immediately before the outbreak of war (end of July 1914). The rise of prices in India was less than that in other countries with the exception of New Zealand, South Africa, and Australia.

The average rates of maritime freights decreased as compared with the preceding year, but were still much above the pre-war level.

Capital.—The upward movement in internal trade and the rich harvest of railway earnings are notable features of the year. Clearing House returns for the five chief ports in 1918 exceeded the high record of the previous year by no less than 55 per cent. and amounted to Rs. 1,396 crores as against Rs. 901 crores in 1917, and Rs. 650 crores in the pre-war year 1913. The total number of new Joint Stock Companies registered in 1918-19 was 292 with an authorised capital of Rs. 21,38 lakhs, as against 276 companies with an authorised capital of Rs. 32,20 lakhs in the preceding year. Cotton mills and coal mining companies accounted for a part of the increase in the total number. Company flotations in the year 1918-19 and in the preceding five years were as follows :—

Authorised Capital in lakhs of rupees.

	Banking and Loan.	Cotton Mills.	Jute Mills.	Tea planting.	Coal mining.	Others.	Total.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
1913-14 (pre-war year) ..	6,26	84	56	51	17	58,57	66,91
1914-15	39	47	..	18	27	3,12	4,43
1915-16	32	29	64	29	17	5,49	7,20
1916-17	3,05	92	3,73	1,18	69	7,69	17,26
1917-18	12,51	82	1,00	1,15	66	16,06	32,20
1918-19	43	3,90	..	72	1,00	15,33	21,38

Prices of securities and shares showed an increase in the case of Government securities, banks, coal companies, and flour mills, and a decrease in jute and cotton mills. The fluctuations between 1914 and March 1919 are not without interest and are to be found in the following table :—

Index number of the prices of securities and shares taking the price on the 29th July 1914 as 100.

	29th July 1914.	26th July 1917.	26th March 1918.	27th March 1919.
5 Government securities	100	70	68	74
101 Port Trust and Municipal Debentures ..	100	89	84	84
10 Banks	100	106	112	116
32 Jute Mills (Ordinary)	100	311	467	383
65 Cotton Mills (Ordinary)	100	132	162	157
90 Coal Companies (Ordinary)	100	141	137	162
1 Woollen Mill (Cawnpore—Ordinary) ..	....	106	125	125
88 Tea Companies (Ordinary)	100	127	125	123
7 Flour Mills (Ordinary)	100	120	162	180
1 Iron and Steel Company (Tata—Ordinary)	100	332	295	286

During the later part of 1919 the financial situation has taken a totally different complexion as a result of the great amount of surplus money in circulation owing to recent war expenditure and to a consequent fierce outburst of industrial adventure, accompanied by extravagant speculation in shares. Bombay

has been the centre of these developments, but the whole country is effected. The situation was subjected to further disturbance through the continual rise in exchange, which in the first half of December was above 2s. 4d. to the rupee.

THE IMPORT TRADE.

The value of the imports of merchandise in 1918-19 was Rs. 169 crores (£113 millions), an increase of nearly Rs. 19 crores (£13 millions or 12 per cent. over the preceding year. This was also an increase of Rs. 23 crores (£15 millions) or 16 per cent. above the annual average of the five years immediately preceding

the war. The value of the import trade in 1918-19 was the highest recorded, with the exception of the pre-war year 1913-14. The increase in value was due to a rise in prices. The following statement shows the value of the import trade since the beginning of this century :—

<i>Five yearly averages.</i>	<i>Rs. (lakhs.)</i>	<i>Yearly Totals.</i>	<i>Rs. (lakhs.)</i>
Five years ending 1903-04	78,42	Year 1913-14 (pre-war year) ..	1,83,25
“ “ “ 1908-09	111,85	“ 1914-15	1,37,93
“ “ “ 1913-14 (pre-war average) ..	145,85	“ 1915-16	1,31,99
“ “ “ 1918-19 (war average) ..	147,80	“ 1916-17	1,49,63
		“ 1917-18	1,50,42
		“ 1918-19	1,69,03

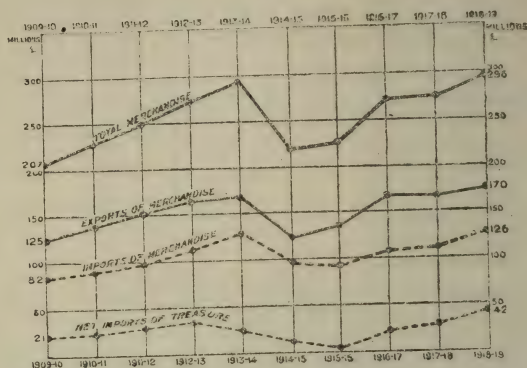
The noticeable features of the returns as compared with 1917-18 are (1) the large increase of Rs. 4.69 lakhs or 60 per cent. in the value of iron and steel imported, and of Rs. 4.57 lakhs or 106 per cent. in the value of imported cotton twist and yarn; (2) the increase in silk manufactures, raw cotton, wheat, Railway plant and rolling stock, liquors, mineral oil other than kerosene, spices, apparel, machinery, and articles imported by post; and (3) the

decrease in kerosene oil, matches, and timber.

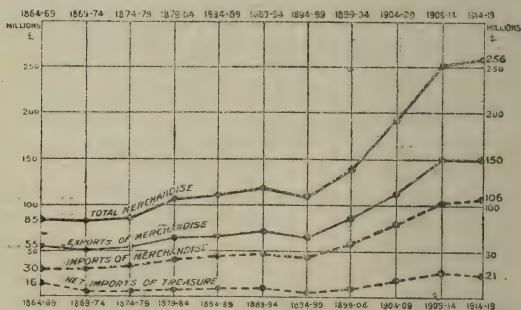
The value of the imports into Bombay increased by no less than Rs. 14 crores or 25 per cent. mainly owing to cotton twist and yarn, and piece-goods. Bengal showed an improvement of Rs. 6 crores, chiefly in metals and manufactures of metals, and Burma of nearly a crore of rupees. In the case of Sind there was a decrease of Rs. 2 crores.

The Foreign Sea-borne Trade of India.

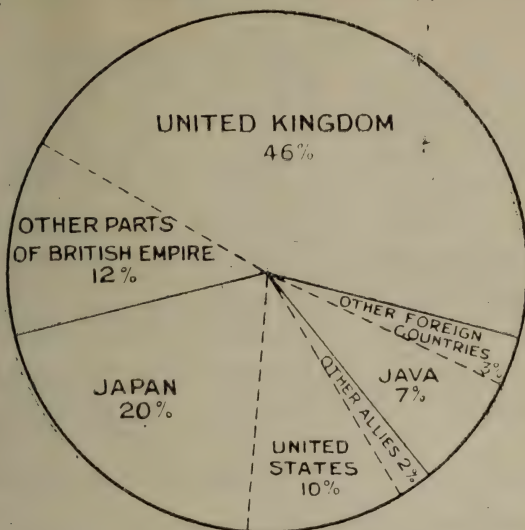
(a) In a decade—1909-10 to 1918-19.



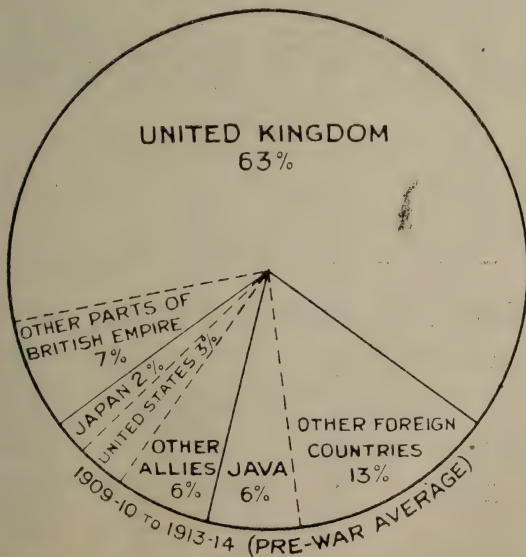
(b) During half a century—1864-65 to 1918-19.



Imports—(Year under review).



1918-19



1909-10 TO 1913-14 (PRE-WAR AVERAGE)

Chief Imports:—The chief imports into India were as follows:—

	Annual average of five years 1909-10 to 1913-14.	War average (1914-15 to 1918-19.)	1917-18.	1918-19.
	Rs.	Rs.	Rs.	Rs.
Cotton goods	48,40,85,000	47,43,31,000	52,22,16,000	51,68,85,000
„ yarn	3,77,18,000	4,94,79,000	4,29,52,000	8,86,63,000
Sugar	13,17,58,000	14,70,48,000	15,31,98,000	15,61,36,000
Iron and steel	11,17,45,000	9,61,00,000	7,75,80,000	12,44,99,000
Railway plant and rolling-stock ..	6,10,94,000	3,48,19,000	49,63,000	1,04,35,000
Machinery of all kinds, including belting.	5,80,04,000	5,76,53,000	5,23,50,000	5,85,84,000
Silk, raw and manufactures	3,94,54,000	3,93,14,000	4,02,75,000	4,74,94,000
Chemicals, drugs, etc.	2,12,73,000	3,42,56,000	4,30,10,000	4,21,96,000
Mineral oil	3,72,03,000	4,02,30,000	3,64,07,000	3,61,32,000
Liquors	2,02,46,000	2,36,64,000	2,49,96,000	3,30,21,000
Hardware	3,17,04,000	2,79,47,000	2,71,55,000	3,20,83,000
Paper and pasteboard	1,27,07,000	1,96,48,000	2,31,12,000	2,72,07,000
Salt	79,16,000	1,81,66,000	2,20,08,000	2,33,10,000
Provisions	2,05,10,000	2,14,82,000	1,77,37,000	1,93,81,000
Motor cars and cycles	1,00,64,000	1,11,45,000	72,16,000	38,89,000

Cotton manufactures—The chief features of the year's import trade were a large increase in the quantity of cotton twist and yarn and a correspondingly large decrease in piece-goods. The annual average value of piece-goods imported during the five war years was almost the same as the pre-war quinquennial average, but the quantity imported decreased by 30 per cent. The total

imports of cotton manufactures including twist and yarn were valued at Rs. 61 crores as against Rs. 57 crores in the preceding year, and Rs. 52 crores the pre-war quinquennial average. These imports were 36 per cent. of the value of the total imports in 1918-19, as against 38 per cent. in 1917-18, and 36 per cent. the pre-war average. The chief descriptions of imports were as follows:—

	Average of five years 1909-10 to 1913-14.	War average 1914-15 to 1918-19.	1917-18.	1918-19.
	Rs.	Rs.	Rs.	Rs.
Twist and yarn	3,77,18,000	4,94,79,000	4,29,52,000	8,86,63,000
Piece-goods—				
Grey (unbleached)	21,08,56,000	19,65,42,000	18,43,23,000	23,59,42,000
White (bleached)	11,20,33,000	12,33,43,000	14,20,48,000	13,13,05,000
Coloured, printed or dyed	13,15,47,000	12,41,47,000	16,14,58,000	11,81,94,000
Fents of all descriptions	*	69,79,000	94,21,000	86,18,000
Total piece-goods	45,44,36,000	45,10,11,000	49,72,50,000	49,40,59,000
Hosiery	92,86,000	94,84,000	1,02,52,000	87,28,000
Handkerchiefs and shawls	52,20,000	22,91,000	15,90,000	20,77,000
Thread	36,10,000	49,66,000	61,89,000	58,36,000
Other sorts	1,15,33,000	65,79,000	69,35,000	61,85,000
Total	52,18,03,000	52,38,10,000	56,51,68,000	60,55,48,000

* Separately distinguished from 1912-13.

The value of cotton twist and yarn imported more than doubled, while that of piece-goods was slightly less than in the preceding year.

Cotton yarn.—Twist and yarn were imported to the extent of 38 million lbs. as against the low figure of 19 million lbs. in the preceding year, and 42 million lbs. the pre-war normal. The value of these imports amounted to Rs. 887 lakhs, an increase of 106

per cent. over the preceding year, and of 135 per cent. over the pre-war average. Had the level of prices of 1917-18 prevailed, the value would have been Rs. 843 lakhs. There was thus an increase of Rs. 44 lakhs due to higher prices. The average declared value per lb. rose to Rs. 2-5-3 from Rs. 2-3-5 in the preceding year. The imports of yarn as compared with the production of yarn in the Indian mills were as follows:—

		Imports.	Indian Mills Production.
		lbs.	lbs.
Annual average for the five years 1904-05 to 1908-09 ..		38,573,000	641,776,000
" " " " " " 1909-10 to 1913-14 (Pre-war average) ..		41,791,000	646,754,000
" " " " " " 1914-15 to 1918-19 (War average) ..		34,063,000	666,227,000
year 1914-15		42,864,000	651,985,000
" 1915-16		40,427,000	722,425,000
" 1916-17		29,530,000	681,107,000
" 1917-18		19,400,000	660,576,000
" 1918-19		38,095,000	615,040,000

The different counts imported taking the average of the pre-war quinquennium as 100 are shown below:—

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
Nos. 1—20	100	26	581
" 21—30	100	22	58
" 31—40	100	43	72
Above No. 40	100	47	89
Unspecified descriptions	100	85	78

Important Developments.—The details of counts of twist and yarn imported from abroad and produced in the Indian mills are of interest when placed in juxtaposition.

Imports from abroad and production in the Indian mills of cotton twist and yarn.

Quantity in thousands of lbs.

	Pre-war average (1909-10 to 1913-14).		1917-18.	
	Imports.	Production.	Imports.	Production.
	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)
Nos. 1 to 20	1,375	478,535	355	446,455
" 21 to 30	4,374	146,363	978	183,667
" 31 to 40	23,213	18,699	10,066	24,389
Above No. 40	7,602	2,655	3,570	5,842
Unspecified descriptions	5,230	..	4,431	..
Wastes .. ..	..	502	..	223
Total	41,794	646,754	19,400	660,576

Imports, 1918-19.				
	From the United Kingdom.	From Japan.	Total from all countries.	Production.
	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)	lbs. (1,000)
Nos. 1 to 20	240	6,730	7,990	4,01,860
" 21 to 30	606	1,906	2,524	189,205
" 31 to 40	4,436	12,214	16,785	19,189
Above No. 40	2,001	4,733	6,734	4,555
Unspecified descriptions	2,329	1,697	4,062	..
Wastes .. ..	..	..	..	231
Total	9,612	27,280	38,095	615,040

The conclusions to be drawn from this table are :—

(1) The imports from abroad of the coarser counts 1s to 20s increased the quantity imported (7,990,000 lbs.) being nearly six times the pre-war average, but the production of these counts in the Indian mills decreased to 402 million lbs. from 446 million lbs. in 1917-18 and 478 million lbs. in the pre-war quinquennium. There was thus in the year under review an increase in imports, but a decrease in production of counts from 1s to 20s as compared with the pre-war period.

(2) In counts 21s to 30s, there was an increase in the imports from nearly one million lbs. in 1917-18 to 2½ million lbs., and also in the production from 184 million lbs. to 189 million lbs. The imports were, however, still 42 per cent. less than the pre-war normal while the production on the other hand was higher by 29 per cent.

(3) The imports of counts 31s to 40s and above, increased to 23 million lbs. from 14 million lbs. in 1917-18, but the production decreased to 24 million lbs. from 30 million lbs. The imports were 23 per cent. below the pre-war average, while the production was 11 per cent. higher. This is of considerable interest.

In regard to the sources of supply of foreign yarn, the feature of the year was the large increase in the imports from Japan and the

decrease in the share of the United Kingdom. Japan supplied over 27 million lbs. or 72 per cent. of the total imports—chiefly counts 16s to 20s and 31s to 50s as against 4 million lbs. or 22 per cent. in the preceding year, and only one per cent. (457,000 lbs.) in the pre-war quinquennium. The increase in the imports of Japanese yarn is especially marked in counts 31s to 40s and 16s to 20s. The imports from the United Kingdom decreased to over 9 million lbs., or only 25 per cent. of the total imports, from 15 million lbs. or 77 per cent. in 1917-18, and 37 million lbs. or 90 per cent. the pre-war average China supplied over a million lbs. as against nil in 1917-18.

Cotton piece-goods.—In piece-goods (India's chief import) white goods and coloured goods both decreased in quantity by no less than 43 per cent. Grey goods owing to the large imports from Japan decreased by only 7 per cent. The value of grey goods increased by 28 per cent. to over Rs. 23 crores, while that of white goods decreased by 8 per cent. to Rs. 13 crores, and of coloured goods by 27 per cent. to Rs. 12 crores. The declared value per yard of grey goods rose from 4 annas 9 pies in 1917-18 to 6 annas 6 pies, white goods from 4 annas 6 pies to 7 annas 4 pies, and coloured goods from 6 annas 6 pies to 8 annas 4 pies. The following table shows the proportion of the quantity and value of the different descriptions of cotton piece goods imported during the year under review and the preceding year, the average of the pre-war quinquennium being taken as 100 :—

	Average of five years 1909-10 to 1913-14.		1917-18.		1918-19.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Grey, unbleached	100	100	47	87	44	112
White, bleached	100	100	77	127	44	117
Coloured, printed or dyed	100	100	63	124	36	90
Fents of all descriptions ..	100 (a)	100 (a)	86	182	66	167

The imports for the past five years with the averages of the two quinquennial periods ending with the years 1908-9 and 1913-14 and of the war period are stated below :—

	Grey (unbleached), millions of yards.	White (bleached) millions of yards.	Coloured, printed, or dyed, million of yards.
Average of five years ending 1908-09	1,230·7	572·7	515·4
" " " " " 1913-14 (pre-war average) ..	1,331·0	654·3	631·5
" " " " " 1918-19 (war average) ..	904·9	518·9	386·3
" " " " " year 1914-15	1,320·2	604·2	494·8
" " " " " 1915-16	1,148·2	611·4	358·7
" " " " " 1916-17	847·0	589·8	454·9
" " " " " 1917-18	625·5	502·3	395·6
" " " " " 1918-19	583·4	286·6	227·3

(a) Average of two years 1912-13 and 1913-14.

The detailed imports are of interest :—

Imports of piece-goods (in millions of yards).

Grey (unbleached).	Average 1909-10 to 1913-14.	1917-18.	1918-19.
Dhutis, saris and scarves	646·6	398	304·3
Jaconets, madapollams, mulls, etc. ..	128·3	62·7	48·9
Longcloth and shirtings	522·5	122·8	159·6
Sheetings	·6	30·2	53·8
Other sorts	33	11·8	16·8
Total	1,331	625·5	583·4
White (bleached).	Average 1909-10 to 1913-14.	1917-18.	1918-19.
Dhutis, saris, and scarves	70·6	41·6	35·8
Jaconets, madapollams, mulls, etc. ..	208·2	164·8	133·9
Longcloth and shirtings	129·1	113·3	65·9
Nainsooks	199·4	150·2	27·1
Other sorts	47	32·4	23·9
Total	654·3	502·3	286·6
Coloured, printed, or dyed.	Average 1909-10 to 1913-14.	1917-18.	1918-19.
Dhutis, saris, and scarves	95·8	40·5	21·4
Cambrics, etc.	102·3	50·8	29·3
Shirtings	105·7	60·8	24·7
Prints and chintz	159·4	100·1	70
Drills and jeans	21	22·8	16·9
Checks, spots, and stripes .. .. .	..	11·3	5·3
Twills	26·8	23·5	10·8
Other sorts	120·5	84·9	48·9
Total	631·5	395·6	227·3

In 1918-19 all the principal descriptions of imported cotton piece-goods declined, with the exception of grey longcloth and shirtings and grey sheetings. The most important decreases were in white nainsooks, white longcloth and shirtings, and coloured shirting.

England and Japan.—The share of the United Kingdom in grey goods imported decreased to 64 per cent. from 87 per cent. as will be seen from the following statement :—

Percentage share of the United Kingdom in the imports of piece-goods.

	Five years ending 1913-14.	1916-17	1917-18.	1918-19.
	Per cent.	Per cent.	Per cent.	Per cent.
Grey piece-goods	98·8	90	87·2	64·3
White „	98	98·7	98·8	95·9
Coloured „	93·5	88·7	91·8	88·5

Ninety-six per cent. of white goods imported came from the United Kingdom and the remaining four per cent. consisting chiefly of drills, jeans, longcloth, and shirtings, was imported mainly from Japan. In coloured, printed or dyed goods, the share of the United Kingdom decreased to 88 per cent. from 93 per cent. the pre-war average. A table similar to the preceding table brings out the remarkable increase in Japan's share in 1918-19 in the import trade in piece-goods :—

Percentage share of Japan in the imports of piece-goods.

	Five years ending 1913-14.	1916-17.	1917-18.	1918-19.
	Per cent.	Per cent.	Per cent.	Per cent.
Grey piece-goods	·2	9	11·7	35·4
White „ .. .. .	....	·4	·5	3·7
Coloured „	·1	4·8	4·7	9·1

The increase in grey goods from Japan was especially in grey longcloth and shirtings, sheetings, drills and jeans, and jacconets, and in coloured goods, chiefly in flannels and flannelles, drills, jeans, shirtings, and chadars. The shares of the principal countries in the imports of piece-goods were :—The United

Kingdom 77·3 per cent. ; Japan 21·2 per cent. ; the United States 1 per cent. ; Italy ·1 per cent. ; and Holland ·1 per cent.

Cotton hosiery.—Of the total trade valued at Rs. 87 lakhs, imports from Japan amounted to Rs. 74 lakhs. Imports from the United Kingdom were valued at Rs. 9 lakhs.

Sugar.—Next to cotton manufactures, sugar is India's largest import. The following are the chief sources of supply and the receipts from them :—

Imports of sugar (excluding molasses and confectionery).

	Average of five years 1909-10 to 1913-14.	War average 1914-15 to 1918-19.	1917-18.	1918-19.
	Tons.	Tons.	Tons.	Tons.
Java	453,000	367,200	363,700	363,100
Mauritius	128,800	40,700	32,200	77,200
Straits Settlements	1,700	44,400	61,000	62,100
China (including Hongkong)	4,500	5,900	4,300	2,900
Egypt .. .. .	....	1,600	1,300	900
Japan	200	5,800	4,500	400
Germany	1,700	....	....	....
Austria Hungary	42,600	4,300	....	....
Other countries	1,000	2,400	3,700	100
Total all countries, tons.	633,500	472,300	470,700	5,06,700
Value Rs. (000) ..	12,50,97	14,15,02	15,04,04	15,36,81

Imports were 8 per cent. higher in quantity and only 2 per cent. in value than in the preceding year. Had the level of prices of 1917-18 prevailed, the imports would have been valued at Rs. 16.19 lakhs instead of Rs. 15.37 lakhs. There was, therefore, a decrease of Rs. 82 lakhs due to lower prices. Java sugar (both from Java and the Straits Settlements) was imported to the same extent as in the preceding year, *viz.*, 425,200 tons against 424,700 tons. The imports of Mauritius sugar were 77,200 tons and the quantity was 140 per cent. above that of the preceding year, but still 40 per cent. below the pre-war normal. Nearly 92 per cent. of this sugar was imported into Bombay, and the remainder into Bengal. Imports from Japan, China, Hongkong, and Egypt were below those of last year. There were no imports of beet sugar. The Indian production of cane sugar in 1918-19 was estimated at 2,337,000 tons as against 3,311,000 tons in 1917-18, a decrease of no less than 29 per cent. The total area was 2,820,000 acres as against 2,809,000 acres in 1917-18. Since the war Cuba has outstripped India as the foremost cane sugar producer. Next to Cuba and India comes Java.

Iron and Steel.—Iron and steel are the most important of India's imports after cotton manufactures and sugar. The impossibility of obtaining supplies, together with the resulting high prices and the use of substitutes considerably reduced the imports below the pre-war average. In the year ending 31st March 1919, there was an increase in quantity of 19 per cent. over the preceding year, but the imports (181,400 tons) were still less than one-fourth of the pre-war quinquennial average. The value, on account of higher prices, rose by 60 per cent. to Rs. 12.45 lakhs. The United Kingdom reduced her share of this trade to 42 per cent. from 51 per cent. in 1917-18, while the United States and Japan accounted for 42 and 8 per cent. respectively as against 41 and 3 per cent. In the pre-war quinquennium the shares of these three countries were, the United Kingdom 60 per cent. the United States 3 per cent., and Japan *nil*. Corrugated sheets again decreased to only 2,500 tons in 1917-18, and 175,500 tons, the pre-war average. This is truly a remarkable decrease. The United States for the first time took the lead in the imports of bars and channel with 21,600 tons, while the United Kingdom supplied only 3,500 tons, as against 22,800 tons, the pre-war average imports.

Railway plant and rolling stock.—The total value of the imports in 1918-19 on private and Government account amounted to Rs. 1.68 lakhs, of which Rs. 1.04 lakhs were on private account and Rs. 64 lakhs on Government account. The imports were 70 per cent. above those of the preceding year but were still 81 per cent. below the pre-war quinquennial average. Of the total imports (Rs. 1.68 lakhs), carriages and wagons accounted for Rs. 1.15 lakhs, locomotive engines Rs. 49 lakhs, and materials for construction Rs. 4 lakhs. There was a noticeable increase in the imports of carriages and wagons on private and Government account, while there were no imports of leepers of wood or of steel or iron. The share

of the United Kingdom in the total imports was 95 per cent., Japan 2.5 per cent. and the United States 2.3 per cent.

Other Metals.—Copper was imported to the extent of 2,900 tons against 2,400 tons in the preceding year, and 12,600 tons, the pre-war quinquennial average. Japan had 56 per cent. of the trade, the United Kingdom 19 per cent. and Australia 17 per cent. In the previous year (1917-18) the shares of these three countries were: Japan 80 per cent. the United Kingdom 9 per cent. and Australia 4 per cent. The decrease in the case of Japan was mainly in unwrought tiles, ingots, etc., while she increased her supplies of braziers and sheets, and wire. Australia sent 500 tons of upwrought copper as against 100 tons in the previous year. The imports of brass, bronze, and similar alloys including mixed or yellow metal for sheathing increased to 4,400 tons from 2,900 tons. Over 4,000 tons or 92 per cent. of the total imports came from Japan as against 2,400 tons in 1917-18. Aluminum, zinc, and tin were imported in increased quantities. Lead sheets for tea-chests amounted to 4,400 tons as against 3,200 tons in the preceding year and the increase was mainly due to larger arrivals from the United Kingdom and Ceylon.

Tea-chests, mainly of wood, were valued at Rs. 91 lakhs, as against Rs. 94 lakhs in 1917-18. Japan accounted for nearly 50 per cent. of the total imports against 36 per cent. in the preceding year, and the United Kingdom had 40 per cent. of the trade against 43 per cent. Unsettled Russia was entirely out of the market. In 1917-18, her share in the imports was 14 per cent. of the whole. In the year just ended it was a beggarly half per cent. of the total.

Machinery and Millwork.—The imports of machinery and millwork, including belting, were valued at nearly Rs. 5.86 lakhs, against Rs. 5.23 lakhs in the preceding year. There were noticeable increase in cotton mill machinery (Rs. 49 lakhs), in boilers (Rs. 12 lakhs), and in electrical machinery (Rs. 10 lakhs). Sewing and knitting machines decreased by Rs. 21 lakhs, and jute mill machinery by Rs. 12 lakhs. Cotton mill machinery was valued at Rs. 1.65 lakhs, of which the United Kingdom supplied Rs. 1.36 lakhs, the United States Rs. 16 lakhs, and Japan Rs. 13 lakhs. The share of Bombay was the same as in the preceding year, *viz.*, 91 per cent. Jute mill machinery amounted to Rs. 57 lakhs as against Rs. 69 lakhs in 1917-18. The United Kingdom accounted for over Rs. 54 lakhs as against Rs. 62 lakhs in the preceding year, and Japan only Rs. 2 lakhs against Rs. 5 lakhs. Electrical machinery was imported to the extent of Rs. 39 lakhs, an increase of 35 per cent. over the preceding year. The imports from the United States nearly doubled from Rs. 8 lakhs in 1917-18 to Rs. 16 lakhs in the year under review, while the imports from the United Kingdom increased from Rs. 18 lakhs to Rs. 20 lakhs. The pre-war average imports from the United States were Rs. 2 lakhs and from the United Kingdom Rs. 31 lakhs. The imports from America have, since the war, greatly increased.

Silk.—The quantity of raw silk imported decreased to 1,426,000 lbs. from 1,832,000 lbs. in the preceding year. China and Hongkong

accounted for 87 per cent. of the total imports, but reduced their supplies by 22 per cent.

Chemicals, Drugs, &c.—The total value of imported chemicals decreased by 8 per cent. to Rs. 2,49 lakhs. Carbide of calcium, soda bicarbonate, and acids were imported in larger quantities, while there were decreases in sulphur, aluminous sulphates including alum, ammonia and its salts, bleaching materials, coppers, disinfectants, potassium compounds, caustic soda, and sodium carbonate. The quantity of sulphur imported was less than half of the preceding year's imports and amounted to 4,800 tons. The decrease was due to smaller shipments from Japan which supplied almost the entire quantity of the imports in the year under review. There were practically no imports of sulphuric acid (only two tons). The pre-war requirements (five-yearly average) were 3,100 tons. The United Kingdom accounted for 63 per cent. of the total value of chemicals imported, Japan 24 per cent.

and the United States nearly 6 per cent. In the pre-war year the shares of these countries were—the United Kingdom 75 per cent., Japan 1·5 per cent. and the United States '3 per cent.

Drugs and medicines were valued at nearly Rs. 1,47 lakhs as against Rs. 1,33 lakhs in the preceding year. There was a considerable increase in the imports of quinine salts (on private and Government account) from Java. The total imports from all sources increased to 161,000 lbs. (94,000 lbs. on private account and 67,000 lbs. on Government account) from 67,000 lbs. in the preceding year.

Mineral Oil.—The main features in regard to the imports from abroad of mineral oil in the year under review were:—(1) the large increase in the imports of fuel oil; (2) the increase in lubricating oils; and (3) the heavy decrease in the imports of kerosene oil. The following table shows the statistics of imports of the different descriptions of mineral oil:—

Imports of Mineral Oil from foreign countries (i.e., excluding Burma).

	Average of five pre-war years 1909-10 to 1913-14.	1914-15 to 1918-19 War average.	1917-18.	1918-19.
	Gallons.	Gallons.	Gallons.	Gallons.
Fuel Oil	8,130,000	16,697,000	15,309,000	27,598,000
Kerosene—				
In bulk	50,860,000	40,431,000	26,477,000	7,455,000
„ tins	16,049,000	8,102,000	4,907,000	5,300,000
TOTAL KEROSENE ..	66,909,000	48,533,000	31,384,000	12,755,000
Lubricating Oil	13,522,000	16,595,000	15,375,000	19,077,000
Benzine, benzol, petrol, etc. ..	131,000	97,000	366,000	....
Paints, solutions & compositions.	2,000	3,000	....	5,000
Other kinds	2,271,000	906,000	363,000	1,006,000
TOTAL MINERAL OIL ..	90,965,000	82,831,000	62,797,000	60,441,000

The total imports were 60 million gallons or nearly 4 per cent. less than those in the preceding year, and 34 per cent. less than the pre-war average. The quantity of kerosene imported from abroad, chiefly owing to freight difficulties and high prices, decreased to 12½ million gallons, an amount which was actually below one-fifth of the pre-war imports. On the other hand, the coastwise exports from Burma increased to 117 million gallons from 107 million gallons in 1917-18. Prices were higher than in the preceding year. In fact, had the prices of the preceding year prevailed the value of the imports from abroad would have been Rs. 87 lakhs instead of Rs. 1,06 lakhs. American oil was imported to the extent of 10 million gallons only, as against 23 million gallons in 1917-18, and 42 million gallons, the pre-war average. Fuel oil increased to 27½ million gallons from 15 million gallons owing to the larger imports from Persia which now supplies three-fourths of the total imports. Lubricating oils were received in larger quantities from Borneo and America. There were practically no imports from abroad

of benzine, benzol, petrol, and other motor spirit (only 60 gallons against the record imports of 366,000 gallons in 1917-18 and 37,000 gallons in 1913-14). The coastwise exports of petrol, benzine, and other motor spirit from Burma to other parts of India increased to 8,453,000 gallons from 5,188,000 gallons in 1917-18.

Liquors.—There was a noticeable increase in the imports of rum, brandy, and still wines other than port. The imports of ale and beer, whisky, champagne, and port decreased. The total quantity of all liquors imported was 3,568,000 gallons, an increase of nearly 4 per cent. over the preceding year. The pre-war average imports were in the neighbourhood of 6,400,000 gallons. Over 50 per cent. of the imports in 1918-19 consisted of ale, beer, and porter, 41 per cent. of spirit, and 8 per cent. of wines. 1,801,000 gallons of ale, beer, and porter were imported, as against 1,858,000 gallons in 1917-18 and 4,405,000 gallons, the pre-war average. Japan again considerably increased her supplies and for the second time had the largest share of the trade. Sixty

per cent. of the total quantity imported came from that country, as against 48 per cent. in the preceding year. The imports from the United Kingdom were 33 per cent. as against 45 per cent. in the previous year. America increased her supplies, while the imports of Australian beer decreased. The imports of Dutch beer were quite insignificant. The value of imported beer increased by 32 per cent. to Rs. 69 lakhs, but had the prices of 1917-18 prevailed, the value would have been Rs. 53 lakhs. In other words, there was an increase of Rs. 16 lakhs due to higher prices. The production of Indian breweries in 1918 was 3,214,000 gallons, an increase of 32 per cent. as compared with the preceding year. In the

pre-war year Indian breweries produced only 3,654,000 gallons. The quantity of whisky imported decreased to 532,000 gallons from 656,000 gallons in 1917-18. The United Kingdom had 98 per cent. of this trade as in the two previous years. The value of these imports increased by 14 per cent. to Rs. 1,03 lakhs. Brandy was imported to the extent of 258,000 gallons, an increase of 30,000 gallons over 1917-18. France, with 188,000 gallons, was the principal source of supply, followed by the United Kingdom (59,000 gallons), Natal (6,000 gallons), and Holland (4,000 gallons). Wines amounted to 277,000 gallons as against 215,000 gallons in 1917-18.

Hardware, etc.—The principal features in the trade in hardware were an increase in the imports of agricultural implements and other implements and tools, and a decrease in enamelled ironware and metal lamps. The total value of the imports increased by Rs. 49 lakhs or 18 per cent. to Rs. 3,21 lakhs. The percentage shares of the chief exporting countries were as follows :—

					Average of five pre-war years 1909-10 to 1913-14.	1917-18.	1918-19.
					Per cent.	Per cent.	Per cent.
United Kingdom	..	..	..	..	59	41	36
United States	..	..	..	..	7	28	31
Japan	..	..	..	..	1	25	29
Other countries	..	..	..	..	33	6	4
TOTAL					100	100	100

America and Japan have considerably increased their exports since the outbreak of war. The value of agricultural implements rose by Rs. 7 lakhs to nearly Rs. 19 lakhs, and of builder's hardware by a lakh of rupees to over Rs. 19 lakhs. Japan increased her exports of implements and tools which were valued at Rs. 10 lakhs as against Rs. 62,000 in 1917-18, and Rs. 60 only in the pre-war year 1913-14. The imports of enamelled ironware decreased by 40 per cent. to Rs. 11 lakhs, mainly owing to the decrease in the imports from Japan. Only 800,000 metal lamps were imported as

against 1,144,000 in 1917-18, and 4,662,000 in the pre-war year. The United States supplied 85 per cent. as against 80 per cent. in the preceding year, and Japan 9 per cent. as against 16 per cent. The value of cutlery imported was Rs. 19 lakhs as against Rs. 16 lakhs in 1917-18. The United Kingdom exported 43 per cent., the United States 32 per cent., Japan 23 per cent. The imports of electroplatedware increased to Rs. 4 lakhs from nearly Rs. 3 lakhs in the preceding year, and the main source of supply was, as usual, the United Kingdom.

Paper and paste-board.—The value of the total imports of paper and pasteboard was Rs. 2,72 lakhs, as against Rs. 2,31 lakhs in the preceding year, and Rs. 1,27 lakhs, the pre-war quinquennium average. There has been a noticeable diversion of trade since the outbreak of war as will be seen from the following table :—

Percentage shares in the total imports of paper and pasteboard.

					Average of five years (1909-10 to 1913-14).	1917-18.	1918-19.
					Per cent.	Per cent.	Per cent.
United Kingdom	..	..	..	..	57.8	26.8	20.0
Japan	..	..	..	..	4	25.5	25.6
United States	..	..	..	..	1.0	8.7	22.0
Norway	..	..	..	..	3.5	20.0	22.0
Sweden	..	..	..	..	3.1	13.0	
Germany	..	..	..	..	17.2	....	....
Austria-Hungary	..	..	..	..	8.6	....	....
Other countries	..	..	..	..	8.4	6.0	4.9
					100	100	100

An examination of the above table shows :—

(1) With the disappearance of Germany and Austria-Hungary from the Indian market, the imports from Japan, the United States and Norway have considerably increased, the most important feature of the year under review being the increase in the share of the United States from 8·7 per cent. in 1917-18 to 22 per cent.

(2) The United Kingdom has considerably reduced her exports to India on account of the war, and her share decreased to 20 per cent. from 58 per cent. in the pre-war period.

Wood pulp was imported to the extent of 2,100 tons as against 3,600 tons in 1917-18. Steps have been taken to develop the bamboo pulp industry on a large scale in India including Burma. One large paper mill company, for example, is proceeding at once to the erection of a mill in Burma, which will turn out 10,000 tons per annum. Hitherto the pulp industry has been confined mainly to the temperate zones, as for example to Scandinavia and Sweden. Such experiments will be watched with interest.

Salt.—The quantity of salt imported from abroad (420,800 tons) was 25 per cent. above that of the preceding year, but 23 per cent. below the pre-war normal. The main feature of the trade was the increase in the imports from Egypt (Port Said). Fifty per cent. of the total quantity imported came from Egypt, as against 36 per cent. in the

preceding year, and only 12 per cent. the pre-war average. The United Kingdom more than doubled her shipments, but the quantity (39,900 tons) was still only one-fourth of the pre-war imports. Aden and Spanish salt was imported in smaller quantities.

Provisions.—There were increases in the imports of farinaceous and patent foods, bacon, hams, cocoa, chocolate, and jams and jellies, but on the other hand, quite noticeable decreases in biscuits, cakes, condensed and preserved milk, and also cheese. The total value of provisions imported amounted to nearly, Rs. 1,94 lakhs, as against Rs. 1,77 lakhs in the preceding year, and Rs. 2,05 lakhs, the pre-war quinquennial average. Had the level of prices of 1917-18 prevailed, the value would have been Rs. 1,79 lakhs or there was an increase of Rs. 15 lakhs due to higher prices. Nearly 32 per cent. of the total value was accounted for by canned and bottled provisions, 26 per cent. by farinaceous and patent foods, and 15 per cent. by condensed or preserved milk. The quantity of canned and bottled provisions imported (4,100 tons) was almost the same as in the preceding year. The increase in farinaceous and patent foods was mainly due to larger arrivals from the Straits Settlements in the form of sago, sagoflour, etc. The quantity of biscuits imported was only one-twelfth of the pre-war quinquennial average. The noticeable feature of this trade was the increase in the share of Japan from 34 to 48 per cent. and the decrease in that of Australia from 52 to 37 per cent.

Motor cars and Motor cycles.—The number of motor cars imported in the year under review was only 400, or less than one-seventh of the number imported in the pre-war year 1913-14. The embargo on the imports of motor cars and motor cycles was removed on 14th December, 1918, and the imports during the last four months of the year (December to March) after the armistice were 344 cars as against only 56 cars in the first eight months. The following table shows the number of cars imported since the pre-war year 1913-14 :—

Number of Motor Cars imported.

	From United Kingdom.	From United States.	From other countries.	Total.
1913-14 (pre-war year).. ..	1,669	868	343	2,880
War average (five years) 1914-15 to 1918-19.. ..	537	1,681	99	2,317
1914-15	1,350	510	145	2,005
1915-16	787	2,136	198	3,121
1916-17	489	4,169	120	4,778
1917-18	39	1,222	21	1,282
1918-19	21	368	11	400

Ninety-two per cent. of the total imports came from the United States, as against 95 per cent. in the preceding year, while the United Kingdom sent only 21 cars or 5 per cent. The number of motor cars registered in India at the end of March 1919 was 19,385, while that of motor cycles 8,058. Only 8 motor wagons were imported, as against 15 in the preceding

year, and 76 in the pre-war year. Tyres for motor cars and motor cycles decreased in number to 92,428 from 94,658 in the preceding year, mainly due to the smaller imports from Italy and the United States. The United Kingdom, however, increased her supplies to 60,000 from 44,000.

The above figures as to the motor trade being only for the year ended 31st March 1919, is interesting to supplement them with statistics for the period April—September, 1919, which have just officially been published. During the six months mentioned the number of cars imported was 3,202, valued at Rs. 90 lakhs, against only 34 valued at Rs. 1½ lakhs

in the corresponding period of last year, when there was an embargo. Of these 3,200 cars, 3,039 were from the United States, 130 from the United Kingdom, four from Italy and one from France. Bombay imported 1,572. Calcutta, 938; Madras 329; Burma, 229; and Karachi 134.

Other articles.—Of the other articles of import not analysed in this chapter the more important are enumerated below:—

	Annual average of five years 1909-10 to 1913-14.	War average 1914-15 to 1918-19.	1917-18.	1918-19.
	Rs.	Rs.	Rs.	Rs.
pieces	1,54,72,000	1,96,93,000	1,90,14,000	2,40,92,000
woollen manufactures	3,08,38,000	1,81,70,000	2,09,72,000	2,17,42,000
instruments, apparatus, etc. .. .	1,35,82,000	1,65,66,000	1,72,45,000	2,16,80,000
tobacco	71,07,000	1,32,43,000	1,69,97,000	2,14,61,000
clothing	1,46,67,000	1,43,45,000	1,29,61,000	1,83,48,000
hats	88,21,000	1,53,32,000	2,34,84,000	1,64,75,000
dyeing and tanning substances.	1,38,01,000	1,06,42,000	1,41,10,000	1,58,99,000
paints and painters' materials ..	71,00,000	98,99,000	96,73,000	1,26,81,000
seeds	7,72,000	58,19,000	92,46,000	1,25,46,000
glass and glassware	1,61,92,000	1,28,02,000	1,62,46,000	1,24,61,000
grain, pulse and flour	19,68,000	63,27,000	7,73,000	1,12,35,000
haberdashery and millinery .. .	1,36,54,000	1,02,31,000	87,39,000	1,06,59,000
wood and timber	79,39,000	1,02,29,000	1,32,73,000	1,00,16,000
soap	61,87,000	96,45,000	1,13,34,000	1,00,11,000
fruits and vegetables	1,07,72,000	1,10,30,000	1,03,18,000	93,17,000
articles imported by post	1,69,59,000	2,77,82,000	3,08,87,000	4,96,85,000

THE EXPORT TRADE.

The value of the exports of Indian merchandise in 1918-19 was Rs. 239 crores (£ 159 millions). This was an increase of Rs. 6 crores (£4 millions) or 2 per cent. over the preceding year, and of Rs. 20 crores (£13 millions) or 9 per cent. over the annual average of the five years immediately preceding the war. The value of the export trade was the highest recorded, with the exception of the two pre-war years 1912-13 and 1913-14. The increase in value was due to a rise in prices as already explained. The following statement shows the value of the export trade since the beginning of this century —

	Rs. (lakhs).
Five yearly averages.	
Average of five years ending 1903-04	121,31
" " " " 1908-09	161,84
" " " " 1913-14 (pre-war average)	219,50
" " " " 1918-19 war average	215,96

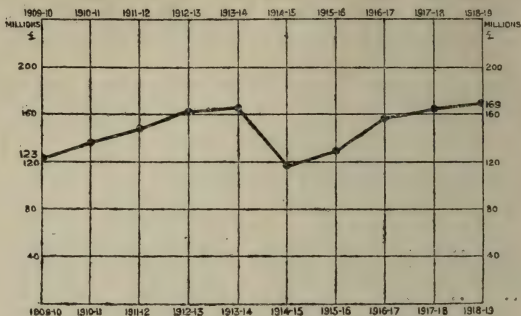
Yearly totals.	
Year 1913-14 (pre-war year)	244,20
" 1914-15	177,48
" 1915-16	192,53
" 1916-17	237,07
" 1917-18	233,44
" 1918-19	239,31

The noticeable features of the returns are (1) the large decrease of Rs. 14 crores in the value of foodgrains exported; (2) a decrease to the extent of Rs. 12 crores in the exports of raw cotton; (3) the surprisingly large increase of Rs. 10 crores in the value of jute manufactures exported; (4) the recovery of Rs. 6 crores in last year's low exports of raw jute; and (5) the increases in the value of seeds (Rs. 3 crores), raw and tanned skins (Rs. 3 crores), tanned hides (Rs. 2 crores), raw wool (Rs. 1 crore), and oils (Rs. 1 crore).

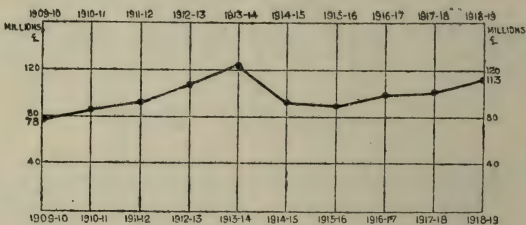
India's six chief exports, in order of importance in 1918-19, were: jute, raw and manufactured; cotton, raw and manufactured; grain, pulse, and flour; hides and skins raw and tanned; tea; and seeds. Raw and manufactured jute was the principal export in the year under review, as was cotton in the preceding year. Manufactured jute by itself was the chief export of the year, reaching the record total of Rs. 52 crores, and exceeding the export of raw and manufactured cotton taken together by Rs. 7 crores. An examination of the trade returns for the past thirty years shows that on seventeen occasions, the chief export was raw and manufactured (chiefly raw) cotton, on seven occasions raw and manufactured jute, and on six occasions food grains.

Exports, Imports, and net Exports of private merchandise during the ten years ending 1918-19.

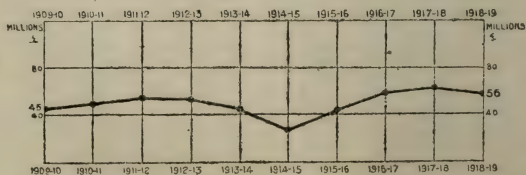
EXPORTS.



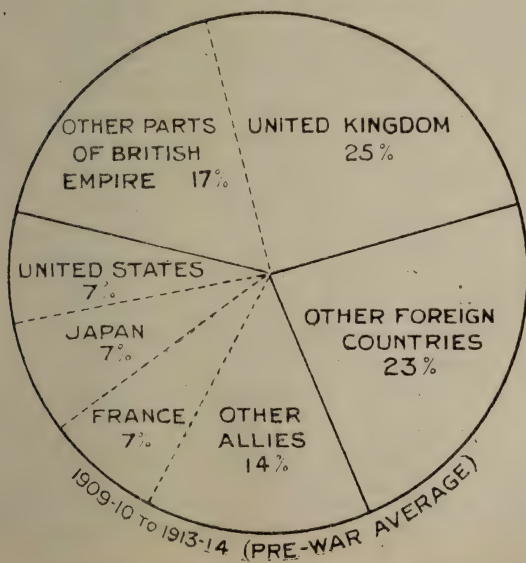
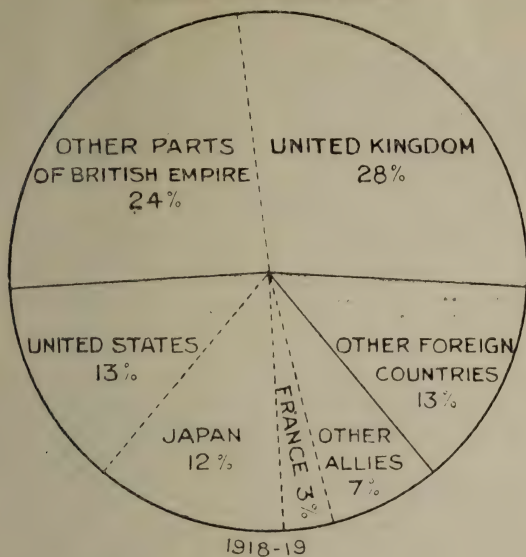
IMPORTS.



NET EXPORTS.



Exports—(Year under review).



The value of the export trade of Bengal increased by Rs. 18 crores or 21 per cent. which was mainly due to the larger exports of raw jute and seeds and also, be it noted, to the increase in the price of manufactured jute. Bombay showed a decrease of Rs. 10 crores, chiefly in raw cotton and wheat, and Sind of Rs. 9 crores in food grains, especially wheat and barley. There was an improvement of Rs. 4 crores in the case of Burma and of Rs. 3 crores in the case of Madras. These figures bring out in a somewhat suggestive way the unique prosperity of Calcutta's export trade during the year ending March 1919.

Jute and Jute Manufactures.—The total value of raw jute exported was Rs. 13 crores and of manufactured jute Rs. 52 crores. The combined value (Rs. 65 crores) was the highest recorded. This represented 27 per cent. of the total value of the export of Indian merchandise as compared with 21 per cent. in 1917-18, and 19 per cent. in the pre-war quinquennium. Jute manufactures alone accounted for 22 per cent. of the total exports of the year as against 9 per cent. in the pre-war quinquennium. The following table shows the values of raw and manufactured jute exported during the last two years and in the pre-war period :—

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
	Rs. (lakhs).	Rs. (lakhs).	Rs. (lakhs).
Jute, raw	22,20	6,45	12,72
„ manufactures.. ..	20,25	42,84	52,65
Total ..	42,45	49,29	65,37

The value of raw jute exported nearly doubled, while that of jute manufactures was 23 per cent. above that of the preceding year. Bengal accounted for over 99 per cent. of these exports.

Raw Jute.—The total quantity exported was 398,100 tons or 2,229,600 bales of 400 lbs. each. The exports were 43 per cent. above the abnormally low exports of the preceding year, and 48 per cent. below the pre-war normal. During the first eight months of the year the quantity exported showed an increase of no

less than 80 per cent. and amounted to 261,900 tons, as against 146,000 tons in the corresponding period of the previous year. In the later months, December to March, after the armistice there was an increase of only 3 per cent. over the corresponding period of the previous year. The value of the year's exports was Rs. 12,72 lakhs, an increase of 97 per cent. over the preceding year. Had the prices of 1917-18 prevailed, the value would have been Rs. 9,24 lakhs, or there was an increase of Rs. 3,48 lakhs on account of higher prices.

Jute Manufactures.—Jute manufactures were for the second time India's chief export. There was a decrease in the quantity exported but a large increase in value on account of higher prices. The total weight of jute manufactures exported was 681,600 tons, a decrease of 5 per cent. as compared with the preceding year, while the value of these exports increased by 23 per cent. to Rs. 52 crores, a record figure. The appended table shows the details of the different descriptions of jute manufactures exported :—

Exports of Jute Manufactures.

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
Number of bags exported	339,122,000	758,391,000	583,096,000
Weight „ „ „ tons.	325,700†	406,900	382,500
Yards of cloth exported	969,971,000	1,196,826,000	1,103,211,000
Weight „ „ „ tons.	275,200†	307,100	292,100
Weight of other kinds exported .. „	4,200†	5,500	7,000
Total weight of Jute manufactures „	605,100†	719,500	681,600a
Value of bags exported Rs.	9,39,10,000	19,47,35,000	22,33,40,000
„ cloth „ „	10,75,75,000	23,07,25,000	29,69,47,000
„ other kinds	10,02,000	29,71,000	62,35,000
Total value of Jute manufactures „	20,24,87,000	42,84,31,000	52,65,22,000

† Figures of exports during 1913-14. Pre-war average figures are not available.

(a) The exports from Bengal which are included in these figures amounted to 677,100 tons or over 99 per cent. of the total exports.

The United Kingdom took 135 millions of bags, or 23 per cent. of the total number exported as against 303 millions or 40 per cent. in the preceding year. Of the other principal importing countries, France, Italy, Siam, China, Japan, the West Indies, and the Argentine Republic also took less, while there were larger exports

to Australia, New Zealand, Egypt, Indo-China, Peru, and Java. Shipments of gunny cloth to the United Kingdom and the Argentine Republic increased, but the United States, Canada, France, and Australia imported smaller quantities.

The above figures include shipments on Government account which are shown in the following table :—

Shipments on Government account.

							Bags (millions).	Cloth (million yards).
1915-16	..	..	..	..	..	..	297	35
1916-17	..	..	..	..	..	..	385	135
1917-18	..	..	..	..	..	..	391	205
1918-19	..	..	..	..	..	..	221	269
Total ..							1,294	644

The coastwise exports of gunny bags increased in the year under review.

Cotton and Cotton Manufactures.—The value of raw cotton exported during the year was Rs. 31 crores and that of cotton manufactures Rs. 14 crores. The combined value was 19 per cent. below the value of the preceding year, but slightly above the pre-war average. The figures are shown in the following table :—

	Cotton, raw. Crores of Rs.	Cotton manufactures, including twist. Crores of Rs.	TOTAL. Crores of Rs.
Average of five years 1909-10 to 1913-14 (pre-war average).	33	11	44
Average of five years 1914-15 to 1918-19 (war average).	33	12	45
Year 1916-17	36	14	50
„ 1917-18	43	13	56
„ 1918-19	31	14	45

Raw Cotton.—The quantity of raw cotton exported abroad in 1918-19 was only 183,950 tons or 1,030,100 bales of 400 lbs. each. We have to go back to 1900-01 to find such low exports. There was a decrease of 50 per cent. in quantity as compared with the preceding year, and of 57 per cent. as compared with the pre-war quinquennium. Before the war the British Empire had 6 per cent. of this trade, the Allies 69 per cent. of which Japan took 42 per cent. and enemy countries 22 per cent. In the year under review the share of the British Empire was 9 per cent. and the Allies 90 per cent. of which Japan had 76 per cent. Had the prices of 1917-18 prevailed, the value of the exports would have been Rs. 21,47 lakhs, instead of Rs. 30,98 lakhs, or in other words, there was an increase of Rs. 9,51 lakhs due to higher prices. The wholesale price of Broach cotton per candy of 784 lbs. at Bombay was no less than Rs. 711 at the beginning of the year, and rose to Rs. 915 in August. There was a fall in the later months of the year, and the average for the year was Rs. 692 as against Rs. 507 in the preceding year and Rs. 303, the pre-war average. The 1918-19 crop was estimated to yield 3,671,000 bales of

400 lbs. each as against 3,998,000 bales in 1917-18, a decrease of 8 per cent.

Cotton manufactures.—In regard to Indian piece-goods, exports and production were above the pre-war average, but less than in the preceding year. In twist and yarn, however, there was a decrease both as regards exports and production as compared with 1917-18 and also with the pre-war normal.

Cotton yarn.—The production was 615 million lbs., a decrease of 7 per cent. as compared with 1917-18, and of 5 per cent. as compared with the pre-war average. The reduction in exports was much greater than the decrease in production. The total quantity shipped (nearly 64 million lbs.) was 47 per cent. below the preceding year, and 67 per cent. below the pre-war average. Counts 1s to 20s were 60 million lbs. or 95 per cent. of the total. Most of principal consuming countries took less yarn, the remarkable decrease in the case of China being from 102 million lbs. in 1917-18 to 49 million lbs. in the year under review or 52 per cent. This fact may be ascribed to the comparatively cheap Japanese yarn which has for some years established itself in China.

Cotton piece-goods.—The exports of Indian made piece-goods (149 million yards) were 65 per cent. above the pre-war average, but 21 per cent. below the preceding year. The exports of piece-goods compared with the imports were relatively small. The exports, for example, were only 7 per cent. of the imports from Lancashire. The value of the exports, notwithstanding a decrease in quantity, increased from Rs. 5.54 lakhs in 1917-18 to Rs. 6.45 lakhs on account of higher prices. Had the prices of the preceding year prevailed, the value would have been Rs. 4.43 lakhs. There was, therefore, an increase of Rs. 2.02 lakhs due to a higher range of prices. The exports were as follows :—

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
	Yards.	Yards.	Yards.
Grey	47,414,000	76,378,000	52,416,000
White	422,000	2,433,000	3,275,000
Coloured	42,384,000	110,639,000	93,397,000
Total yards ..	90,220,000	189,450,000	149,088,000
Value in Rs. ..	2,08,95,000	5,53,82,000	6,45,26,000

The following table shows the descriptions of cotton goods produced and exported :—

Production in the Indian mills.

GREY AND BLEACHED PIECE-GOODS.	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
	Millions of yards.	Millions of yards.	Millions of yards.
Shirtings and longcloth	288.1	450.6	393.8
Dhutis	269.5	325.0	369.3
T. cloth, domestics, and sheetings	139.8	137.4	110.5
Chadars	64.1	54.0	37.9
Drills and jeans	26.4	78.6	54.2
Other sorts	66.2	95.3	111.0
Total ..	854.1	1,140.9	1,076.7
COLOURED PIECE-GOODS ..	251.4	473.1	740
Total piece-goods ..	1,105.5	1,614.0	1,345.7

Exports.

GREY AND BLEACHED PIECE-GOODS.	1913-14 (pre-war year).	1917-18.	1918-19.
	Millions of yards.	Millions of yards.	Millions of yards.
Shirtings	2.2	7.8	5.3
Chadars and dhutis	7.6	8.1	6.0
T. cloth and domestics	21.6	35.3	24.1
Drills and jeans .. .. .	.6	1.0	1.1
Other sorts	12.2	26.6	19.2
Total ..	44.2	78.8	55.7
COLOURED PIECE-GOODS ..	45.0	110.6	93.4
Total piece-goods ..	89.2	189.4	149.1

The production of piece-goods in the year under review was 345 million yards (or 31 per cent.) above the pre-war average, but 163 million yards (or 10 per cent.) less than that of the previous year. Persia, Egypt, and Siam took less, while the Straits, East Africa, and Ceylon took more. The exports to Mesopotamia and Aden were the same as in the previous year.

Seventy-nine per cent. of the total quantity of piece-goods exported was shipped from Bombay, as against 84 per cent. in 1917-18. The share of Madras was 20 per cent. as against 16 per cent. in the previous year. In the pre-war quinquennium Bombay had 71 per cent. of the trade and Madras 27 per cent.

Grain, pulse, and flour.—The main feature of the export trade in foodgrains during the last half of the year was the continued necessity of supplementing the food supply of the United Kingdom and of the Allies in Europe. This explains the very heavy exports of rice in the last part of the year and also the unusually large exports of Burma beans. With the failure of the monsoon in the middle of the year the picture entirely changed. The Allies were well on

the road to victory, and the prohibition of the exports of foodgrains to conserve the Indian food supply was thus possible without seriously prejudicing the Allies' cause. After November 1918, exports were almost entirely restricted to countries with considerable Indian populations which are accustomed to rely on India for their food supply. The result was that, whereas in the first six months of the year 1,253,000 tons of rice were shipped from India to other countries, an increase of 66 per cent. as compared with the corresponding period of the previous year, the exports during the last six months were only 764,000 tons, a decrease of 35 per cent. as compared with the corresponding date of the previous year. The exports of wheat amounted to 30,000 tons only in the last half of the year, a decrease of 92 per cent. as compared with the same period in the previous year. Shipments of gram, beans, barley, and other foodgrains were also similarly curtailed. The total exports of all foodgrains in the last six months showed a decrease of no less than 53 per cent. as compared with the corresponding period of the previous year.

The details of the exports are shown in the appended table :—

	Average of five years 1909-10 to 1913-14. (pre-war average.)	Average of five years 1914-15 to 1918-19 (war average.)	1917-18.	1918-19.
	Tons.	Tons.	Tons.	Tons.
Rice, not in the husk	2,397,900	1,684,800	1,939,400	2,017,900
„ in the husk	41,600	32,500	25,200	35,200
„ flour	200	100	100	100
Wheat	1,308,000	807,700	1,454,400	476,100
„ flour	55,000	57,100	71,600	39,900
Pulse—				282,200
Gram	132,000	140,700	327,100	
Beans	158,900	151,000	229,700	78,900
Lentils				29,800
Other sorts				50,600
Barley	226,800	197,900	358,700	226,300
Guar and bajra	41,100	40,800	15,300	5,400
Rice	(a)	27,000	91,000	13,800
Other kinds	49,400	1,600	1,200	700
Total tons	4,410,900	3,141,200	4,513,700	3,247,900
Value Rs.	45,81,11,000	37,41,68,000	53,66,02,000	40,07,13,000

The exports of foodgrains (3,247,900 tons) increased by no less than 28 per cent. as compared with the preceding year, and by 26 per cent. as compared with the pre-war average. The value of these exports was Rs. 40 crores, a decrease of 25 per cent. as compared with the preceding year. Had the level of prices in 1917-18 prevailed, the value would have been 37 crores. There was thus an increase

of Rs. 3 crores due to higher prices. The statistics given above do not include purchases made by Government on military account and shipped on Government or chartered vessels. In the year under review, the total exports of foodgrains on military account, which are not included in the above figures, were 306,800 tons as against 366,500 tons in the preceding year.

(a) Included with other kinds.

Rice.—The exports of rice abroad in 1918-19 amounted to 2,018,000 tons, 4 per cent. above the preceding year, but 16 per cent. below the pre-war quinquennial average. The value of these exports was Rs. 22.96 lakhs as against Rs. 20.66 lakhs in 1917-18. Burma increased her exports by 112,000 tons or 7 per cent. Her share in the total quantity exports was 80 per cent. as against 77 per cent. in 1917-18. The exports from Bengal more than doubled, but the quantity was still 59 per cent. below the pre-war average. Ship-

ments from the other maritime provinces, e.g., Bombay, Sind, and Madras, decreased. Burma exported coastwise 798,000 tons of rice, an increase of 59 per cent over the preceding year, and of 108 per cent. over the pre-war average, in spite of the severe shortage of tonnage. The exports to Bombay increased by more than 141 per cent. to 370,000 tons and those to Madras (193,800 tons) nearly trebled, while Bengal took 24 per cent. less. The exports of paddy slightly increased.

Wheat.—The quantity of wheat exported in 1918-19 was only 476,100 tons, a decrease of 67 per cent. as compared with the preceding year, and of 64 per cent. as compared with the pre-war normal. The wheat harvest of 1918 was good, but the failure of the monsoon in 1918 considerably reduced the exportable surplus, and the exports, especially in the later months of the year, were very small as is clearly seen from the following table :—

	Pre-war average 1909-10 to 1913-14.	1915-16.	1916-17.	1917-18.	1918-19.
	Tons.	Tons.	Tons.	Tons.	Tons.
April to August ..	797,200	642,900	166,100	897,900	398,700
September to March..	510,800	10,000	582,800	556,500	77,400
Total ..	1,308,000	652,900	748,900	1,454,400	476,100

The value of the total exports amounted to Rs. 6.75 lakhs as against Rs. 19.00 lakhs in 1917-18. If the prices of the preceding year had prevailed, the value would have been Rs. 6.19 lakhs, or in other words there was an increase of Rs. 56 lakhs due to higher prices. Arrangements were made during the year through the Royal Wheat Commission for considerable purchases of Australian wheat to relieve the famine situation in India and consignments began to arrive in the latter part of the year. Over 55,000 tons of Australian wheat were imported in March, 105,000 tons in April, and 6,900 tons in May 1919.

The shipments of wheat flour on private account were 30,900 tons, as against 71,600 tons in 1917-18, and 55,000 tons in the pre-war quinquennium.

Hides and skins.—The main feature in the year's trade in hides and skins was the further leap upwards in the exports of tanned hides which synchronised with a decrease in raw hides, owing to the prohibition which was in force up to the beginning of April 1919. The quantity of raw hides exported was 19,100 tons. Seventy-four per cent. of these exports was raw cowhides which decreased to 14,200 tons, from 15,900 tons in 1917-18, and 37,200 tons in the pre-war year 1913-14. The decrease in exports is accounted for by the prohibition which existed on certain classes of raw hides until April, 1919, and partly by the great increase in the tanning of cowhides in India for army purposes, and partly by the great scarcity and cost of freight which limited the export of inferior quality of hides. The largest shipments were to the United Kingdom (8,600 tons and to Italy (4,700 tons).

The exports of raw skins were 25,000 tons an increase of 12 per cent. over the previous year. Nearly three-fourths of the total export went to the United States.

Tanned hides were exported to the extent of 25,500 tons, an increase of 39 per cent. as against the preceding year, and of more than 180 per cent. above the pre-war quinquennial average. Almost the entire quantity (99.6 per cent.) was shipped to the United Kingdom.

Tea.—The exports of Indian tea in 1918-19 were 324 million lbs., a decrease of 10 per cent. as compared with the preceding year, but 21 per cent. above the pre-war average. The estimated outturn in India in 1918, based on returns received in this Department, is 381 million lbs. as against 371 million lbs. in 1917. The exports to the United Kingdom (282 million lbs.) were 87 per cent. of the total exports of tea. The shipments were mainly for the Ministry of Food and the War Office.

In addition to the exports by sea about 2,982,000 lbs. of Indian tea were exported across the land frontier, of which 1,752,000 lbs. were green and 1,230,000 lbs. were black. The exports were mainly to Afghanistan and Persia. The imports of tea across the frontier amounted to 5,903,000 lbs. of which 5,814,000 lbs. were black. Nearly 95 per cent. of the imports was from the Shan States. The imports of tea into India by sea from foreign countries increased in the year under review to 11,146,000 lbs. from 9,666,000 lbs. in 1917-18, due chiefly to larger imports of black tea from Ceylon. Foreign tea is blended in Calcutta under bond with Indian tea for export abroad, and in 1918-19, 890,300 lbs. were blended and exported to the United States, Chile, Peru, and Ecuador.

The balance of tea left in the country for consumption, as estimated by deducting net exports (*i. e.*, exports *minus* imports) and stocks left at the end of the year, from the production *plus* stocks from the previous year, was 53 million lbs. in 1918-19 as against 42 million lbs. in the preceding year, and 22 million lbs. in the pre-war year 1913-14.

Oil-seeds.—The principal features of the year were:—(1) a decrease in the exports of groundnuts, copra, sesamum, and castor;

The diversion of the trade since the outbreak of war is illustrated by the following statement which shows the percentage shares of the chief consuming countries:—

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
United Kingdom	31	50	73
France	27.7	17	10
Italy	4.1	2	5
Belgium	16.3	....	....
Germany	12.2	....	....
Straits Settlements .. .. .	....	13	2
United States	2.3	4	2
Others	6.4	14	8
	100	100	100

The increase in the share of the United Kingdom was mainly due to larger exports of linseed, castor, and rapeseed, while smaller exports of groundnuts accounted for the decrease in the share of the Straits Settlements. The share of Bombay in the total quantity of seeds exported was 46 per cent., of Bengal nearly 30 per cent. of Sind 19 per cent. and of Madras 5 per cent.

Raw wool.—The quantity of raw wool exported abroad was 47 million lbs. as against 43 million lbs. in the preceding year. These figures relate to wool produced in India and do not include wool brought across the frontier and subsequently exported abroad by sea. Seventy-four per cent. of the total exports went from Bombay, and 26 per cent. from Karachi.

Other articles.—Of the other articles not analysed in this chapter, the more important articles are enumerated below:—

	Average of five years 1909-10 to 1913-14.	1917-18.	1918-19.
	Rs.	Rs.	Rs.
Oils	91,90,000	2,05,98,000	3,51,43,000
Metals and Ores—			
Manganese Ore	98,64,000	85,67,000	75,23,000
Wolfram	(a)	1,08,66,000	1,12,70,000
Others	70,40,000	99,95,000	1,27,69,000
Opium	9,96,17,000	2,40,77,000	3,12,91,000
Lac	2,20,15,000	3,77,78,000	2,94,85,000
Rubber	39,38,000	1,62,36,000	2,50,45,000
Dyes—Indigo	29,92,000	1,52,81,000	1,24,85,000
„ Other sorts	85,00,000	69,77,000	80,14,000
Hemp, raw	78,27,000	79,44,000	1,46,90,000
Coffee	1,37,52,000	90,31,000	1,19,38,000
Paraffin wax	54,99,000	1,10,99,000	1,11,85,000
Spices	85,88,000	1,09,20,000	1,09,33,000
Saltpetre	34,99,000	88,74,000	93,25,000
Mica	35,87,000	86,29,000	89,85,000
Provisions and oilman's stores.	45,63,000	70,37,000	61,80,000
Coal and coke	75,77,000	23,90,000	15,63,000
Articles exported by post ..	90,76,000	1,46,39,000	1,69,13,000

(a) Included in others.

Re-exports.—The total value of the exports of foreign merchandise, that is, re-exports, was Rs. 14.55 lakhs, an increase of Rs. 5.43 lakhs or 60 per cent. over the preceding year. The following statement shows the value of the re-exports trade in the last two years as compared with the pre-war quinquennial average:—

Average of five years ending ..		Rg.
1913-14	..	4,61,88,000
Year .. 1917-18	..	9,12,10,000
„ .. 1918-19	..	14,55,68,000

The share of Bombay was 72 per cent. and that of Karachi was 19 per cent. The main features of the year's trade were: (1) the large increase in cotton twist and yarn, and piece-goods; and (2) the increase in raw wool, silk goods, apparel, tea, hardware, and articles by post. The quantity of cotton piece-goods re-exported (114 million yards) was 76 per

cent. above the pre-war average. Asiatic Turkey (Mesopotamia), Persia, Aden, and East Africa considerably increased their imports, while Egypt, Ceylon, and the Straits Settlements took less than in 1917-18. The re-exports of wool, *i.e.*, wool brought across the land frontier and subsequently exported abroad by sea, were 15,662,000 lbs. as against 12,817,000 lbs. in 1917-18, and 8,580,000 lbs. the pre-war average. The entire quantity was shipped to the United Kingdom. Ninety-eight per cent. of the shipments was made from Karachi, and 2 per cent. from Bombay.

The percentage shares of the principal countries in the total re-export trade are given below: the pre-war quinquennial averages are in brackets: the United Kingdom 16 (27); Persia 20 (14); Asiatic Turkey (mainly Mesopotamia) 23 (5); Aden 9 (4); and East Africa 7 (11).

THE DIRECTION OF TRADE.

The main features of the direction of India's trade in the year ended 31st March 1919 were: (1) an increase in the imports from Japan (Rs. 15 crores), and from the United States (Rs. 4 crores) (2) an increase in the exports to the United Kingdom (Rs. 10 crores), to the United States (Rs. 3 crores), and to Asiatic Turkey (mainly Mesopotamia) (Rs. 4 crores); and (3) a decrease in the imports from the United Kingdom (Rs. 5 crores). The following table illustrates the changes that have taken place in the direction of trade in 1918-19, as compared with the previous year and the pre-war quinquennium:—

	IMPORTS.			EXPORTS.			TOTAL TRADE.		
	Pre-war average	1917-18	1918-19	Pre-war average	1917-18	1918-19	Pre-war average	1917-18	1918-19
	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.	Share per cent.
United Kingdom ..	63	54	46	25	26	28	40	37	35
British Possessions .	7	10	12	17	27	24	13	20	19
Total British Empire	70	64	58	42	53	52	53	57	54
Allies	11	24	32	35	37	35	26	32	34
Neutrals	10	12	10	9	10	13	10	11	12
Enemy countries ..	9	..	..	14	..	..	11	..	..
Total Foreign countries.	30	26	42	58	47	48	47	43	46
Total value of trade in thousands of £.	97,231	100,283	112,689	149,411	161,704	169,240	246,642	261,987	281,929
Total value of trade in lakhs of Rs. ..	1,45,85	1,50,42	1,69,03	2,24,12	2,42,56	2,53,86	3,69,97	3,92,98	4,22,89

Total Trade.—The British Empire had 54 per cent. of the total trade, as compared with 53 per cent. in the pre-war period, while the Allies increased their share from 26 per cent. to 34 per cent. The place of enemy countries, which had 11 per cent. of the total trade before the war, has been taken mainly by the Allies (Japan and the United States). A glance at the table will show that the Allies trade increased by as much as 8 per cent., while that

of the British Empire increased by only 1 per cent. and neutrals by 2 per cent.

The Import Trade.—In the import trade the outstanding feature was the decrease in the share of the British Empire from 70 per cent. in the pre-war period to 58 per cent., on account of the decrease in the imports from the United Kingdom which was engaged tooth and nail on the production of munitions of war. The share of other parts of the British Empire

increased and that of the Allies nearly trebled, thanks to Japan and the United States. The share of neutrals remained unchanged. Nearly 9 per cent. of the imports in the pre-war quinquennium came from enemy countries, and their place has been taken by Japan and also by the United States.

The Export Trade—There have been, as is not surprising, noteworthy changes in the direction of the export trade since the outbreak of war. The British Empire which

took only 42 per cent. of the exports in the pre-war period, increased its share to 52 per cent. The share of countries other than those of the British Empire decreased to a corresponding extent (10 per cent.) from 58 to 48 per cent. Enemy countries had nearly 14 per cent. of the exports before the war, chiefly raw materials for their industries, *e.g.*, raw jute, raw cotton, oil seeds, and raw hides and skins. Their place has been taken almost entirely by the British Empire.

The percentage shares of the more important countries in the trade of India in 1918-19, as compared with the previous year and the pre-war quinquennium, are set out below :—

Percentage shares of principal countries in the imports, and exports, and total trade of India.

	IMPORTS.			EXPORTS.			TOTAL TRADE.		
	Pre-war average.	1917-18	1918-19	Pre-war average.	1917-18	1918-19	Pre-war average.	1917-18	1918-19
	Share percent.	Share percent.	Share percent.	Share percent.	Share percent.	Share percent.	Share percent.	Share percent.	Share percent.
United Kingdom ..	62.8	54.4	45.5	25.1	25.6	28.5	40.0	36.6	35.3
Japan ..	2.5	12.1	19.8	7.5	14.1	11.6	5.5	13.4	14.9
United States ..	3.1	7.9	9.5	7.5	12.6	13.1	5.8	10.8	11.7
Egypt .. ..	.2	.7	1.0	.8	10.2	5.8	.6	6.5	4.0
Java	6.4	7.8	6.7	1.3	1.1	1.4	3.3	3.7	3.5
Ceylon .. ..	.5	1.6	1.8	2.7	4.1	4.2	2.4	3.2	3.2
Straits Settlements	2.1	3.5	3.3	3.4	2.9	2.9	2.9	3.1	3.1
France	1.5	1.1	1.1	6.6	3.6	3.5	4.6	2.6	2.5
Italy	1.0	1.2	.5	3.2	3.5	3.8	2.3	2.6	2.5
Australia ..	.7	.6	1.3	1.4	2.3	2.9	1.1	1.6	2.2
Turkey, Asiatic ..	.4	.4	.3	1.0	1.5	2.9	.8	1.1	1.9
Others	18.8	8.7	9.2	38.5	18.5	19.4	30.7	14.8	15.2
TOTAL.	100	100	100	100	100	100	100	100	100

The main facts that emerge from an examination of the above table in regard to countries other than the United Kingdom are briefly these: (1) the remarkable growth in the trade with Japan and the United States since the outbreak of war, (2) the large increase in the exports to Egypt as a result of shipment "for orders," (3) the increase in the trade with Ceylon, Australia, the Straits Settlements, and Asiatic Turkey (Mesopotamia), and (4) the decrease in the exports to France.

Next to the United Kingdom, Japan held the premier place in the import trade of India, and the second place in the export trade, being surpassed in this respect only by the United States. The value of the imports from Japan exceeded Rs. 33 crores in 1918-19, as against Rs. 18 crores in the preceding year, and Rs. 3½ crores in the pre-war period. Cotton manufactures showed the largest increase, and accounted for nearly 51 per cent. of the imports as against 28 per cent. in the preceding year. The following table shows

the rapid increase in the imports of piece-goods from Japan since the outbreak of war :—

Imports of Cotton piece-goods from Japan.

	Grey (unbleached) yards.	White (bleached) yards.	Coloured, printed or dyed yards.
Average of five years 1909-10 to 1913-14.	2,559,000	48,000	521,000
Year 1914-15	15,265,000	68,000	709,000
" 1915-16	34,852,000	901,000	3,349,000
" 1916-17	75,621,000	2,558,000	21,937,000
" 1917-18	73,278,000	2,602,000	18,676,000
" 1918-19	206,838,000	10,484,000	20,806,000

Over 238 million yards of piece-goods were imported from Japan in 1918-19, as against 94 million yards in 1917-18 and only 3 million yards, the pre-war average. Other important increases were in apparel, metals, woollen manufactures, hardware, beer, tea-chests, paper and pasteboard, machinery and mill-work, chemicals, especially alum, aluminous sulphates, and carbide of calcium, haberdashery and millinery, and cement, while there were decreases in sugar and camphor. The imports of matches and glass and glassware, although less than those in the preceding year, were much above the pre-war normal. Besides cotton piece-goods, matches, and glass and glassware referred to above, there have been noticeable increases since the outbreak of war in the imports from Japan of paper and pasteboard, chemicals, paints and hardware, tea-chests, woollen goods, beer, electrical appliances, cement, stationery, toys, brushes and brooms, zinc, brass, bronze and similar alloys, wood pulp, and starch and farina. The value of the exports to Japan (Rs. 29 crores) was 14 per cent. below the preceding year, but 75 per cent. above the pre-war average. Raw cotton accounted for 80 per cent. of the value of total exports. There was, however, a decrease of 46 per cent. in the shipments of raw cotton in the year under review. Other important variations were an increase in the

exports of rice, opium, shellac, and tanned skins, and a decrease in pig iron and rapeseed. The value of gunny bags exported increased, but the quantity was less than that of the preceding year.

The total value of the trade with the United States was Rs. 49 crores, an increase of 17 per cent. over 1917-18 and of no less than 131 per cent. over the pre-war average. Imports were valued at Rs. 16 crores, and exports at Rs. 33 crores. Metals (chiefly iron and steel) and mineral oil accounted for 49 per cent. of the import trade. The quantity of iron and steel imported (49,000 tons) was 140 per cent. above the pre-war average, although 12 per cent. below the preceding year. There was a further decrease in the imports of mineral oil from 34 million gallons to 23 million gallons. The imports of hardware, instruments (chiefly electrical), machinery, and provisions increased while cotton piece-goods and especially motor cars decreased. In exports, raw and manufactured jute, raw hides and skins, and shellac accounted for 92 per cent. of the total value as against 86 per cent. in the preceding year. The quantity of gunney cloth exported decreased to 639 million yards, while the value increased to Rs. 20 crores on account of considerably higher prices. Other important variations were a decrease in raw jute, raw hides, shellac, and tea, and an increase in raw skins.

FRONTIER TRADE.

The total value of the frontier trade again increased in the year under review and amounted to Rs. 31 crores, an increase of 10 per cent. over the previous year's record figure of Rs. 28 crores, and of 63 per cent. over the pre-war quinquennial average. The value of this trade is only 6 per cent. of the total value of the sea-borne trade in 1918-19, and the following table shows the total trade, inclusive of both merchandise and treasure :—

Merchandise and Treasure.

	IMPORTS.	EXPORTS.	TOTAL.
	Rs.	Rs.	Rs.
Average of five years 1909-10 to 1913-14 (pre-war average)	10,30,83,000	8,59,28,000	18,90,11,000
Average of five years 1914-15 to 1918-19 (war average) ..	13,38,68,000	11,49,62,000	24,88,30,000
Year 1917-18	14,77,90,000	13,26,43,000	28,04,33,000
" 1918-19	15,94,37,000	14,87,57,000	30,81,94,000

The registration of the trade, as noted on page 30 of the previous year's review, includes much that is not in reality frontier trade. The trade, for example, of the Shan States (which are part of Burma) should not be treated as trans-frontier trade.

The quantity of raw wool imported across the frontier (nearly 298 million lbs.) was almost the same as in the preceding year.

CUSTOMS REVENUE.

The rates of customs duty on imported articles remained unchanged, as did also the duties on exports, *viz.*, those on jute, rice, and tea. The total gross sea and land customs revenue (excluding salt revenue) reached the record figure of Rs. 18,25 lakhs, an increase of no less than Rs. 8,41 lakhs or 85 per cent. over the pre-war quinquennial average and of Rs. 1,70 lakhs or 10 per cent. over 1917-18. The import duties contributed Rs. 12,57 lakhs or 69 per cent. of the total revenue collected; export duties Rs. 3,69 lakhs or 20 per cent., the excise duty on cotton manufactures Rs. 1,43 lakhs or 8 per cent., and that on motor spirit Rs. 34

lakhs or 2 per cent. Land Customs and Miscellaneous yielded approximately Rs. 22 lakhs or one per cent. This last item includes the cess on the export of indigo (Rs. 48,000) which has been levied since April 1918 with a view to the provision of funds for promoting research in the interests of the indigo industry. The tea cess collected by Government on behalf of the tea industry amounted to Rs. 4½ lakhs in 1918-19. The jute cess, which was introduced in 1912 for the benefit of the Calcutta Improvement Trust, realised Rs. 8 lakhs in the year under review.

SHIPPING.

The net register tonnage of vessels including native craft that entered and cleared with cargoes and in ballast during the year was 10,480,000 tons as against 10,868,000 tons in 1917-18, and 16,216,000 tons, the pre-war quinquennial average. This illustrates the effect of the Great War on shipping so far as India is concerned. Of the total tonnage entered and cleared during 1918-19, steamers constituted 96

per cent. (10,028,000 tons), and sailing vessels (Indian and foreign) only 4 per cent. (452,000 tons). The average tonnage per steamer in the year under review was 1,936 against 1,868 in 1917-18 and 2,582, the pre-war average. Here again is another instance of the effect of war on shipping. The following statement shows the clearances of vessels, with cargoes and in ballast, engaged in overseas trade:—

Tonnage clearances with cargoes and in ballast.

	Average of five years, 1909-10 to 1913-14 (Pre-war period).		Average of five years, 1914-15 to 1918-19 (War period).		1917-18.		1918-19.	
	Tons.	p. c.	Tons.	p. c.	Tons.	p. c.	Tons.	p. c.
British ships (including British Indian)	6,412,000	(79)	4,588,000	(78)	3,990,000	(71)	3,609,000	(69)
Foreign ships	1,688,000	(21)	1,325,000	(22)	1,628,000	(29)	1,617,000	(31)
Total ..	8,100,000	(100)	5,913,000	(100)	5,618,000	(100)	5,226,000	(100)

It will be seen from the above table that the clearances in 1918-19 fell by 35 per cent. as compared with the pre-war quinquennium and by 7 per cent. as compared with the previous year. The share of British ships decreased while that of foreign ships increased. These figures, however, exclude a large number of Government vessels and hired transports.

GOLD AND SILVER (COIN AND BULLION).

A special feature of the year was the large imports of silver on Government account from the United States under the Pittman Act of Congress of 23rd April 1918, the objects of which were, to quote the preamble of the Act, "To conserve the gold supply of the United States; to permit the settlement in silver of trade balances adverse to the United States; to provide silver for subsidiary coinage and for commercial use; to assist foreign governments at war with the enemies of the United States; and for the above purposes to stabilise the price and encourage the production of silver." The Act provided "that the Secretary of the Treasury is hereby authorised from time to time to melt or break up

and to sell as bullion not in excess of three hundred and fifty million standard silver dollars now or hereafter held in the Treasury of the United States." Out of 270 million fine ounces, the equivalent of 350 million dollars in fine silver, the share of India was 200 million fine ounces. Shipments under the Act began to arrive by the end of May 1918, and the total quantity had arrived by July 1919.

In regard to the prohibition on the imports of treasure, the Gold (Import) Act XXII of 1917 for the acquisition by Government of gold imported into British India was in force during the year, and also the Finance Department Notification No. 1571-F., dated the 11th July 1917, which prohibited the import of

silver into India except in the case of (a) current silver coin of the Government of India, (b) silver coin or bullion imported on Government account, and (c) silver coin or bullion imported under license.

Gold.—The imports of gold on private account showed a remarkable decrease in the year under review, and the exports were also less than those of the preceding year. There was actually a net export on private account valued at Rs. 2,48 lakhs (£1,656,000), as against a net import of Rs. 19,94 lakhs (£13,292,000) in 1917-18, and of Rs. 28,86 lakhs (£19,242,000), the pre-war average. These figures take into account the imports and exports of gold bullion into and from Bombay on behalf of the Bank of England. Exports of gold bullion on behalf of the Bank of England were valued at £1,671,000 in 1918-19, as against £2,486,000 in 1917-18. No gold was imported on behalf of the Bank in 1918-19 as against £1,472,000 in 1917-18. These are excluded from the table relating to the Balance of Trade referred to on page 30. Such gold was not in settlement of India's trade balance, but was merely imported, refined, and warehoused in Bombay on behalf of the Bank. On Government account also, there was a net export valued at Rs. 3,08 lakhs (£2,053,000), as against a net import of Rs. 5,24 lakhs (£3,493,000) in 1917-18. The average annual net imports of gold on private and Government account during the five war years ended 1918-19 were nearly Rs. 8 crores (£5 millions) as against Rs. 28 crores (£19 millions), the annual average in the pre-war quinquennium. The

absorption of gold coin and bullion in 1918-19 was Rs. 9,53 lakhs (£6,351,000) as against Rs. 15,33 lakhs (£10,221,000) in the preceding year. During the last quinquennium, that is from 1914-15 to 1918-19, India has absorbed £37 million worth of gold as against £90 millions in the five pre-war years ended 1913-14.

Silver.—The principal feature was, as already noted, the large imports of Pittman Act silver. The price of bar silver per ounce in London on the 2nd April 1918 was 45½d. The highest price during the year was 50d. on the 28th March 1919. The price on 1st April 1919 was 49 ⅞d. The total imports of silver on Government account were 237 million ounces, valued at Rs. 68 crores. The value was more than thrice that of the previous year, and 19 times the pre-war average. The principal sources of supply were the United States (Rs. 50 crores), Hongkong* (Rs. 13 crores) China (Rs. 1 crore), and Australia (Rs. 2½ crores). Smaller exports to Asiatic Turkey (Mesopotamia) mainly accounted for the decrease in the exports on Government account from nearly Rs. 2 crores in 1917-18 to Rs. 1 crore in 1918-19. The total net imports of the white metal into India in 1918-19 were 122 per cent. of the world's production as against 26 per cent., the annual average in the pre-war quinquennium. With this increase in demand, there was a decrease in the world's production of silver in the same period by 19 per cent. These astonishing figures speak for themselves and are such as to leave the imagination gasping.

THE BALANCE OF TRADE.

The main features of the trade of the year are set out below :—

India's Balance of Trade.

	Pre-war average. (£1,000)	War average (£1,000)	Preceding year. (£1,000)	Year under review. (£1,000)
(1) Gross exports private merchandise	149,411	149,405	161,703	169,242
(2) Gross imports— " "	97,232	98,534	100,283	112,689
(3) Net exports— " "	52,179	50,871	61,420	56,553
(4) Imports of Treasure and funds (private account)	52,464	27,294	49,830	15,651
(a) Net imports of Gold	19,242	5,204	14,306	15
(b) " " Silver	4,806	1,992	971	38
(c) " " " Treasure	24,048	7,196	15,277	53
" " " Government	878	454	737	—291
(d) Council Drafts (Net)	27,538	19,644	33,816	15,889
Balance of trade in favour of India .. ..	..	23,577	11,590	40,902
" " " against India	285	..	..	..

* The shipping documents showed Hongkong as the country of consignment, but it is very probable that practically all the 13 crores were shipped mainly from San Francisco, and possibly to some extent from Shanghai, but were transhipped at Hongkong into a steamer for Calcutta. Hongkong itself is not a silver market.

(a) Including interest.

The main characteristic of the table is the new high record balance of trade in favour of India to the extent of nearly £41 million sterling. It will be noted that the rate of conversion has been taken at Rs. 15 to the £ as Section 11 of the Indian Coinage Act of 1906 (Act III of 1906) is still in force. If, however, we take the average rate of exchange of the year, the favourable trade balance increases to £45 million sterling.

From this unprecedented favourable balance should be deducted £11,000,000 representing rupee credits for the Federal Reserve Board in part payment for American silver. In banking parlance these credits are known as

"Federal Reserve Board credits" or merely "Federal credits" † If these credits are allowed for, the high balance of trade in favour of India is (at the rate of Rs. 15 to the £1) practically the same as the previous record, viz., that for the year ending 31st March 1917. It may, however, be mentioned that the rupee credits given to the Federal Reserve Board added to the net Council remittances do not exhaust the various channels by which trade could remit funds to India through Government. For example, fairly large payments were made to a Bank at Bombay on account of East Africa, and similarly large payments have been made in Bombay on account of the Imperial Bank of Persia.

ABSORPTION OF GOLD (both coin and bullion) IN INDIA.

(In thousands of £ sterling.)

	AVERAGE OF 5 YEARS ENDING							1909-10.
	1878-79.	1883-84.	1888-89.	1893-94.	1898-99.	1903-04.	1908-09.	
	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)	£ (1,000)
1. Production ..	..	..	..	463	1,226	1,967	2,267	2,207
2. Imports ..	..	..	..	2,857	3,403	8,667	11,233	16,687
3. Exports ..	..	..	..	1,310	1,894	4,547	5,000	2,234
4. Net imports (i.e., 2-3) ..	594	3,394	2,297	1,547	1,509	4,120	6,233	14,453
5. Net addition to stock (i.e., 1+4)	594	3,394	2,297	2,010	2,735	6,087	8,500	16,660
6. Balance held in mints and Government Treasuries and Currency and Gold Standard Reserves ..	..	..	..	..	439	8,587	4,380	6,427
7. Increase (+) or decrease (-) in stock held in mints, etc., as compared with the preceding year ..	..	..	..	..	+405	+1,780	-2,167	+6,340
8. Net absorption (i.e., 5-7) ..	594	3,394	2,297	2,010	2,330	4,307	10,667	10,320
9. Progressive total of additions to stock ..	3,963	12,504	25,766	34,853	37,650	67,460	105,873	140,227
10. Net progressive absorption ..	3,963	12,504	25,766	34,853	37,211	58,873	101,493	133,800

† The term "American Councils" is now being used, and used by Government, to describe the telegraphic transfers now being sold by the Government of India in New York on India.

Absorption of Gold (both coin and bullion) in India—continued.

(In thousands of £ sterling).

	1910- 11.	1911- 12.	1912- 13.	1913- 14.	AV- ER- AGE OF 5 YEARS ENDING 1913- 14.	1914- 15.	1915- 16.	1916- 17.	1917- 18.
	£	£	£	£	£	£	£	£	£
	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)	(1,000)
1. Production ..	2,200	2,240	2,273	2,293	2,243	2,340	2,367	2,303	2,222
2. Imports ..	18,594	27,660	27,527	18,820	21,858	7,133	3,520	2,839 (a)	(b)
3. Exports ..	2,607	2,487	4,860	3,267	3,091	2,040	4,260	67	(b)
4. Net imports (i.e., 2—3) ..	15,987	25,173	22,667	15,553	18,767	5,093	—740	(a)2,772	17,800 (a)
5. Net addition to stock (i.e., 1+4)	18,187	27,413	24,940	17,846	21,010	7,433	1,627	5,075	20,023
6. Balance held in mints and Gov- ernment Treas- uries and Cur- rency and Gold Standard Re- serves ..	6,487	15,827	19,960	15,000	12,740	10,386	8,428	8,110	17,911
7. Increase (+) or decrease (—) in stock held in mints, etc., as compared with the preceding year ..	+60	+9,340	+4,133	—4,960	+2,983	—4,614	—1,958	—318	+9,801
8. Net absorption (i.e., 5—7) ..	18,127	18,073	20,807	22,806	18,027	12,047	3,585	5,393	10,221
9. Progressive total of additions to stock ..	158,414	185,827	210,767	228,613	184,770	236,046	237,673	242,748	262,770
10. Net progressive absorption ..	151,927	170,000	190,807	213,613	172,029	225,660	229,245	234,638	244,859

Note.—The figures in this table have been revised. The quinquennial average figures are inserted only for comparative purposes. The progressive total of additions to stock (item 9) and net progressive absorption (item 10) are calculated on the annual figures and are not based on these averages. Item 9 is the sum of the yearly figures in item 5 and item 10 the sum of the yearly figures in item 8.

(a) Excludes gold imported and exported on behalf of the Bank of England.

(b) Temporarily discontinued.

COMMERCIAL INTELLIGENCE SYSTEM.

The Commercial Intelligence Department, India, was founded in 1905 under the control of a Director General of Commercial Intelligence. Its primary object was the supply to the public of such information as would stimulate Indian trade development. Since April, 1914, the compilation and issue of official statistics of India have been carried out by the Department of Statistics, India, under the control of a Director of Statistics.

As now constituted the Department serves the purpose of a Central Bureau at which information on subjects of commercial interest is collected and disseminated to the public, and from which replies are posted to enquiries by business men on commercial matters. It is situated at 1, Council House Street, Calcutta, the headquarters of the Director-General. The information collected by the Department and intended for general publication is printed in its weekly official organ, the "Indian Trade Journal." The principal features of the "Journal" are (a) information as to Tariff Changes in the United Kingdom and elsewhere which affect Indian interests, (b) Summaries of the leading features of consular and other trade reports, (c) Abstracts of the proceedings of the various Chambers of Commerce in India, (d) Abstracts of crop reports and forecasts, (e) Government orders, *communiqués* and other notices affecting trade, and (f) anonymous enquiries for securing trade introductions. It also contains analyses of Indian trade statistics.

A Commercial Museum has been permanently organised as a part of the Commercial Intelligence Department with the object of bringing together purchasers and suppliers of Indian manufactures. It thus supplements the existing resources of the Department as a bureau of information, and stimulates the development of the natural resources of the country. The Museum contains samples of such goods of Indian manufacture as have been received for exhibi-

tion together with information as to prices and the names of the manufacturers and commercial agents. The exhibits have been carefully grouped and catalogued. Order books are available in which orders may be registered direct with the manufacturers or their respective commercial agents. An Enquiry Office is attached to the Museum, which is also located at 1, Council House Street, Calcutta, and is open on week days from 10-30 a.m. to 5-30 p.m. and on Saturdays from 10-30 a.m. to 2-30 p.m. *Admission Free.*

Department of Statistics.—This was originally created in 1895 and in 1914 was re-created and re-organised. It is officially under the Department of Commerce and Industry but compiles and publishes reports and returns under the orders of other executive departments.

It is divided into two main divisions, each under a Superintendent. The first division consists of six sections and the second division of four sections.

Section I, the Registry Section, deals with the receipt and issue of letters, pay, pensions, distributions of publications, record and library; Section II deals with Prices, Rate Lists and Freights; Section III with Wage Statistics; Section IV, Judicial, Administrative, Educational and Vital Statistics; Section V. Rail and River Borne Trade; Section VI, Statistics relating to the Inland and Frontier trade of Bengal; Section VII, perhaps the most important section in the whole Department, the Sea-borne Trade section, which compiles the All India Sea-borne Trade Returns including Coasting Trade, Treasure, Shipping, and Customs duties; Section VIII deals with Frontier Trade; Section IX with the Agricultural Returns, Crop Forecasts, Cotton Press Returns, etc; Section X deals with Commercial and Financial Statistics.

Director of Statistics:—G. Findlay Shirras, 1, Council Street, Calcutta.

ADULTERATION OF PRODUCE.

In August 1917 the Department of Commerce and Industry, Government of India, issued a long memorandum to Chambers of Commerce in India on the subject of the adulteration of Indian produce. This memorandum said:—Cotton is still watered; jute is still watered; groundnuts, hides, indigo, oils are freely adulterated; this at least is common knowledge. It is unnecessary to dilate on the loss to Indian trade which this practice of adulteration must involve, but it appears to the Government of India to be specially important at the present time to endeavour to focus attention on the matter. It seems reasonable to suppose that the present war will be followed by a period of keen competition among industrial nations for materials of all descriptions and for products which India should be in a specially favourable position to supply. But it cannot be expected

that India will be able to capture and retain the extended markets which should fall to her share, if steps are not taken to effect a radical improvement in the reputation which, the Government of India fear, some of her products have only too justly merited.

Attitude of Government.—After reviewing the facts concerning the adulteration of wheat, cotton, jute, leather, hemp, and bees' wax the memorandum continued:—It will be seen from the preceding sketch of previous discussions on this subject that the Government of India have been consistently opposed to any attempt to meet the evil by legislative measures. They have held the view that any such measures would be extremely difficult to carry into effect, would seriously hamper trade, and would probably, in any case, prove ineffectual as a practical remedy.

They have maintained the opinion that the proper agency for dealing with these abuses is the trade itself, and that no intervention on the part of Government is desirable. To these views they are still inclined to adhere. At the same time, they would welcome any suggestions on the subject, and would be glad to co-operate, if further discussion should show that any action on their part is at once feasible and desirable. It seems to them, however, more probable that the situation could be most satisfactorily dealt with without any intervention on the part of Government. If the leading exporting firms of any particular commodity in India would arrange with their leading buyers that the latter should insist on freedom from adulteration, an improvement could probably be more readily effected by this means than by any action on the part of Government. This would seem to be the most fruitful line of attack, but it has also been suggested that Chambers of Commerce in India might organise some system of certifying to the purity of products before export. This suggestion seems worthy of consideration.

Adulteration of Ghee.—In the autumn of 1917, considerable feeling was evoked in Calcutta by the practice of adulterating ghee. For instance, a panchayat of Marwaris excommunicated five ghee dealers, in one case two partners were excommunicated for one year and ordered to pay Rs. 1,00,000 towards the purchasing of grazing ground for cattle. In another case a father and son were fined Rs. 25,000 and in other cases the fines ranged from Rs. 500 to Rs. 1,000. Feeling waxed so strong that a deputation asked the Governor to move the Government of India to pass an ordinance, pending legislation, penalising both the adulteration of ghee and the selling or stocking of adulterated ghee. Shortly afterwards an Emergency Bill was introduced, by Sir

S. P. Sinha, in the Bengal Legislative Council, to amend the Calcutta Municipal Act, with special reference to ghee adulteration. Sir Satyendra, in introducing the Bill, said that the existing law had failed to check the practice of adulterating ghee and selling adulterated ghee in Calcutta. In view of the evils resulting from widespread adulteration it was considered necessary that more stringent measures should be taken to provide for the purity of the article and to penalise the manufacture, storage, and sale of ghee that was adulterated. In this Bill a definition for adulteration had been introduced by which ghee must not consist of any article which was not extracted from milk. The penalty imposed under the Bill for offences ranged from a fine of Rs. 200 to Rs. 1,000. The Bill was taken up for consideration after suspending the rules of business and passed.

Burma Ghee Adulteration Act.—In Burma a similar Bill was passed in October, 1917, when the mover of the Bill explained that all that the Bill proposed was to ensure that a purchaser who desires to obtain ghee should be entitled to receive an article which was derived exclusively from milk. If purchaser desired a cheaper substitute, the Bill did not prevent him from obtaining it. It did, however, prevent him from receiving such substitute under the impression he was purchasing ghee. It was not anticipated that the Bill would effect any dislocation of any established trade. It would be necessary for manufacturers and dealers of mixtures which had hitherto been sold under the name of ghee to arrange to sell such mixture under distinctive names in order that the customer might be fully aware he was not purchasing ghee. If such names were speedily adopted, the evils resulting from the sale of these mixtures as ghee would be prevented without any loss or dislocation of industry.

THE CIVIL VETERINARY DEPARTMENT.

To the Civil Veterinary Department, which originated in 1892 as an expansion of the military horse-breeding department, is entrusted the performance or supervision of all official veterinary work in India, other than that of the Army. Its duties fall under the main heads of cattle disease and cattle breeding, horse and mule breeding, and educational work in veterinary colleges.

In 1905 and the following years both the superior and the subordinate establishments were considerably increased; but the strength of the subordinate staff in most provinces was still

far short of the sanctioned establishment, the demand for veterinary graduates being greater than the supply, and the European staff remained small in proportion to the volume of work calling for attention. The post of Inspector-General, Civil Veterinary Department, was abolished with effect from the 1st April 1912, the duties being transferred partly to local Governments and partly to the Agricultural Adviser to the Government of India. Of late years small veterinary departments, modelled on the Civil Veterinary Department, were started in several native states.

INDIAN COTTON DUTIES ACT.

The origin of this fiscal measure dates back to 1894 when the embarrassment caused to the finances of India by the fall in exchange drove the Government of India to the necessity of adopting measures to increase their sources of revenue. Among these measures was the re-imposition of the Customs Tariff which had been in force prior to 1882 subject, however, to this difference that cotton yarns and fabrics, which had formerly been subjected to an import duty, were in 1894, excluded from the list of dutiable articles. This partial re-imposition of import duties had been recommended by the Herschell Commission which, in reporting in 1893 on the currency question, had favoured this method of adding to the revenue as being the least likely to excite opposition. In point of fact, however, this recommendation which was carried into effect in the Indian Tariff Act of March 1894 gave rise to very marked opposition. In support of their policy the Government appealed to the Resolutions passed in 1877 and reaffirmed in 1879 by the House of Commons, the first of which had condemned the levy of import duties on cotton fabrics imported into India as "being contrary to sound commercial policy," while the latter called upon the Government of India to effect "the complete abolition of these duties as being unjust alike to the Indian consumer and to the English producer." It was, however, an open secret that the decision to exclude from the list of dutiable articles cotton yarns and fabrics was not the decision of the Government of India but that of the Secretary of State. It was pertinently pointed out that the volume of trade in cotton goods and yarns then represented nearly one-half of the total imports from abroad, and that the exemption of these important commodities single other important commodities when practically every single other commodity was being subjected to an import duty could not be justified on its merits as a sound fiscal measure, much less when it was an admitted fact that the Budget would still show a deficit.

Excise Duties Imposed.—The opposition to this measure, though it failed to secure its rejection in the Legislative Council, was strong enough to induce the Secretary of State to reconsider the matter. Yielding to the united representations of the Government of India and of Indian public opinion, His Majesty's Government eventually agreed to the re-imposition of import duties on cotton yarns and fabrics provided that it could be shown that such a measure was necessitated by the position of Indian finances, and that it was combined with an Excise duty which would deprive the import tax of any protective character. Accordingly in December 1894, consequent on the further deterioration in the financial position, two bills were introduced in the Legislative Council. The first of these subjected cotton yarns and fabrics to the general import duty of 5 per cent. *ad valorem*. The second imposed an Excise duty on all cotton yarns of 20's and above produced by Mills in British India. In introducing this latter Bill the then Finance Minister, Sir James Westland, was careful to explain that the policy underlying its provisions had

been imposed on the Government of India by the Secretary of State in pursuance of the Resolution of the House of Commons quoted above. The provisions of this particular Bill are of little interest. From the first it was recognised that they were unpractical, Lancashire and Indian spinners disagreed as to the point at which the line should be drawn exempting Indian yarns from the Excise Duty. Practical difficulties were pointed out by Indian spinners as to the impossibility of spinning precisely to a particular count. From the Lancashire point of view it was contended that the Bill offered facilities for evasion while it was admitted that under the system adopted in the Bill, the taxation of Indian and Lancashire products was not being carried out on a similar basis.

Act of 1896.—The Act was in fact doomed to be short-lived, and in December 1895 the Government of India were compelled to re-consider the whole position and to introduce an entirely new measure which became law in January 1896 as the Indian Cotton Duties Act II of 1896. This measure proceeded from two conclusions, namely, that no attempt should be made to obtain any duty from yarns whether imported or locally manufactured, and that an equal rate of duty should be applied to all woven goods whether imported or of Indian origin. With the object of conciliating the opposition, the rate of duty was fixed at $3\frac{1}{2}$ per cent. as opposed to the general rate of Customs duty of 5 per cent. The main provisions of the Act provided that the assessment for the purposes of collecting the Excise duty should be based on returns submitted by the mill-owners; and that provision should be made for a rebate in the case of woven goods exported out of India. No control beyond a requirement that statistical returns should be furnished was attempted in respect of spinning mills. On the other hand certain concessions in the matter of import duty on Mill stores were made by executive order so as to place Indian Mills on a footing more or less equal to their Lancashire competitors.

Criticisms of the Measure.—It is not possible within the limits of the present article to do more than summarise the criticisms with which this measure was received in India. Much of the opposition was based on grounds of a transient character; as for instance that the Indian industry was then in a state of continued depression and that it had been hard hit, particularly in respect of its export trade, by the currency legislation, and by the uncertainty as to the fiscal policy of Government. In some quarters objection was offered to the exemption of yarn, which it was alleged, would place the Indian hand weaving industry at an advantage with the Indian power weaving industry. But the hostility to this measure, as also to the earlier measures already described, clearly proceeded from the feeling that the policy of the Government of India and of the Secretary of State had been dictated by Lancashire, and that the action of Lancashire was due not so much to the fact that there was any real competition between Indian and Manchester goods, but to a desire to handicap the Indian industry

whose progress was already causing uneasiness to Lancashire interests. It was argued that the imports from Lancashire were practically all of the higher counts, which, for climatic and other reasons, Indian mills could not produce; that in any case the advantage to the Indian millowner of the import duty was inconsiderable and was counterbalanced by certain drawbacks, arising from the inferiority of Indian labour, which could not be overcome; and that this advantage, such as it was, could scarcely be said to have a protective character, in view of the higher cost of initial equipment in the case of an Indian mill which has to import its machinery, and of working expenses consequent on the scarcity of skilled labour and on the necessity of importing stores required in the production of cloth. Finally, from the standpoint of the consumer, very severe criticism was directed against the reduction, in favour of imported cotton goods, of the general rate of duty from 5 per cent. to $3\frac{1}{2}$ per cent. on the ground that the effect of the legislation would relieve the richer classes who were consumers of the finer Manchester fabrics and impose new taxation on the poorer classes whose requirements were met by the Indian mills.

New Factors in the Situation.—Since the passing of this measure into law the policy of the Government of India in this respect has frequently been the subject of attack in the press and in the Legislative Councils while it has also formed the subject of continued representations by the industrial interests affected and political organizations. In more recent years the agitation in favour of the abolition of the Excise duties has been revived by the growth in England of a strong body of public opinion in opposition to the policy of Free Trade. Advantage has been taken of this new phase in English economic thought to press on behalf of India the acceptance of a policy of Protection and the removal of the Excise duties is now claimed by the opponents to this measure as a necessary corollary of the application to the British Empire of the principles associated with the name of Mr. Chamberlain. A new factor in the situation which has strengthened the position of those who are in opposition to the Excise duties is to be found in the severe competition which Indian mills have to face in China as well as in India from the Japanese industry. The Japanese market was lost to India in the early years of this century. More recently, however, Japan has entered as a competitor with India into the China market, while within the last few years it has pushed its advantage as against the Indian millowner in the Indian market itself. Again it is claimed that the recent enhancement of the silver duty has materially affected the position of the Indian spinner who relied on the China market. On two occasions within the last five years the question of Excise duties has come prominently to the front as a result of debates in the Viceroy's Council. The official attitude is firmly based on the position

that the Excise duties stand and fall with the import duties. Against such an attitude all arguments based either on the advantages of a Protectionist as opposed to a Free Trade policy or on the handicap to which the present system exposes the Indian millowner can, of course, make no head way. The Government of India are confronted with a heavy recurring loss in their revenues as a result of the abolition of the opium traffic.

Policy of 1917.—The policy of Government towards the Cotton Duties underwent a further development in 1917. In the budget of that year provision was made for interest and sinking fund charges on £ 100 millions, the contribution of India towards the cost of the war. This demanded in addition to the natural increase in the revenues fresh taxation to the extent of £ 3 millions per annum. Amongst the expedients adopted to produce this revenue was the raising of the import duty on cotton goods from $3\frac{1}{2}$ per cent to $7\frac{1}{2}$ per cent, which is the general tariff rate. At the same time the cotton excise duty was fixed to remain at the previous figure of $3\frac{1}{2}$ per cent, thus giving the indigenous industry a slight protection to the extent of 4 per cent. The question of the abolition of the Excise entirely had to be dismissed from consideration in view of the demands upon the exchequer, as it was estimated to produce in 1917-18 £ 320,000. By means of the increase in the tariff on Cotton Duties the Finance Member estimated to produce an additional £ 1 million per annum. The proposal was received with immense satisfaction in India as a step towards the righting of what is almost everywhere regarded as a reverse economic wrong. It aroused very vehement protests in Lancashire where the cotton industry organised its political vote and brought great pressure to bear upon the Secretary of State to withdraw the measure. Mr. Austen Chamberlain, the then Secretary of State for India, stood firm and with the Government at his back refused to budge an inch from the position which he had taken up in supporting the Government of India in this matter. There were anxious moments in the House of Commons when the Labour Party joining with the Irish Nationalists and the Lancashire vote mobilised its forces against the Government especially as the attitude of Mr. Asquith and his following was obscure. In the end Mr. Asquith gave his support to the Government policy on the understanding that this, in common with all other fiscal issues, would be reconsidered at the end of the war. With this support, the Bill was carried through the House of Commons by a large majority. Whatever may be the influence of this slight protective duty in the future it cannot possibly affect the Lancashire industry at the present time. The dominant factor governing the imports of cotton is not its price but freight and prices have scared to such heights that a four per cent. protective duty cannot possibly influence the volume of Lancashire trade whilst these conditions prevail.

THE INDIAN COTTON COMMITTEE.

A resolution issued by the Government of India in September 1917 announced the appointment of a Committee to examine the possibilities of increasing the cultivation of long-stapled cotton in India, of improving existing methods of ginning and marketing cotton, of preventing adulteration, damping and mixing, of improving the accuracy of the cotton forecasts and, generally, of making the statistical information published by Government of greater utility to the cotton trade. The Committee were also directed to submit recommendations in regard to the staff required and the organization necessary for the development of the cultivation of long-stapled cotton in tracts which they considered suitable for that purpose.

Personnel.—The Committee consisted of the following:—Mr. J. MacKenna, C.I.E., I.C.S., Agricultural Adviser to the Government of India, President. Mr. N. N. Wadia, C.I.E., Ex-Chairman, Bombay Mill Owners' Association, Mr. F. Hodgkinson, Member of the Council of the British Cotton Growing Association, Mr. H. F. Ashton, Executive Engineer, Punjab, Mr. G. S. Henderson, Imperial Agriculturist, and Mr. W. Roberts, Principal, Lyallpur Agricultural College, Members. Mr. F. Noyce, I.C.S., Secretary.

The **Report** of the Committee, which was issued in April, 1919, opens with an introductory chapter which gives an outline of the general position in regard to the world's supply of cotton which led to the appointment of the Committee. To this chapter is appended a tabular statement showing the trade and botanical classification of every variety of cotton grown in India with its length of staple and ginning percentage, the tract in which the variety is grown and its estimated area and outturn in a normal season. It is explained that cotton of which the staple is three quarters of an inch or over is regarded as long staple cotton for the purposes of Bombay, whilst, for the purposes of the Lancashire mills, long staple cotton must be a "commercial inch" in length, the actual measurement being somewhat less, and rather over seven-eighths of an inch. The Committee conclude that, so far as separate figures are available, of the 4,728,000 bales of cotton produced by India in a normal season, 726,000 fall within the Lancashire definition of long staple cotton and an additional 478,000 bales within the Bombay definition.

Division of the Report.—The Report proper is divided into two parts, the first of which is devoted to the agricultural and irrigational aspects of the problems with which the Committee dealt and the second to their commercial aspect. The first part is again divided into chapters in which the cotton growing Provinces and Native States are dealt with separately and ends with some general recommendations regarding agricultural work on cotton. The second part contains four chapters only, one on general commercial questions, more especially the question of preventing malpractices in ginning and pressing factories, one on cotton forecasts and statistics, one in which the establish-

ment of an East Indian Cotton Association in Bombay is recommended, and one in which the formation of a Central Cotton Committee to act as a link between the Agricultural Department and the trade is advocated.

Agricultural Problems.—The Report emphasizes that, of the methods by which an improvement in the quality and an increase in the outturn of Indian cotton can be secured, botanical work is the most important and reveals the success of the efforts the Agricultural Department has already made in this direction. In the Punjab, the United Provinces, the Central Provinces, Madras and the Broach, Kumpta-Dharwar and Khandesh tracts of Bombay, it has already evolved strains of cotton superior to the indigenous varieties either in staple, yield or ginning percentage (that is, the percentage of lint to the total outturn of lint and seed) and sometimes in all three. In the Central Provinces, where there were, at the time the Report was written, about 700,000 acres under the short-stapled *roseum* variety, the improvement has been in yield and ginning percentage, in the Punjab where there were 276,000 acres under "Punjab American" cotton in 1917-18, the improvement has been in staple and ginning percentage, whilst, in the Tinnevely tract in Madras with 220,000 acres under the improved variety evolved by the Agricultural Department and known as *Karunganni*, the improvement has been in yield, staple and ginning percentage. It is in these three tracts that the Agricultural Department has achieved its most striking successes in evolving superior strains of cotton. In the Broach and Kumpta-Dharwar tracts, its superior strains have made much less headway, partly owing to the lack of a suitable organisation to push them and partly to the fact that Broach and Kumpta cotton are varieties which are possessed of very stable characteristics and it is, therefore, difficult to secure anything in the nature of a recognizable improvement in them. This is also the case in the "Westerns" tract in Madras. The two improved strains which the Agricultural Department has put out in this and the adjacent "Northerns" tract have not proved sufficiently superior to the local cottons to justify their being persevered with. A fresh start has recently been made with two other selections, No. 25 in the case of Westerns and No. 14 in the case of Northerns, and the Committee recommend that these should be given an exhaustive trial. In the Broach tract, where the incursion of the short-stapled cotton known as *goghari* is proving a serious menace to the reputation of Broach cotton, they recommend that the Agricultural Department should endeavour to evolve a type of Broach cotton as superior to *goghari* in staple as is the present Broach cotton when grown pure and superior to it in yield and ginning percentage. They do not consider that the very short-stapled variety of *neglectum* cotton known as *roseum* in the Central Provinces and Khandesh and "Aligarh white-flowered cotton" in the United Provinces should represent the end of the Agricultural Department's efforts to improve the indigenous varieties in those tracts and desire that further attempts

should be made to evolve a superior variety of *neglectum* or *inlicum* cotton or a cross between them which can compete successfully with the superior shorter-stapled varieties in the matter of profit to the cultivator. For the Punjab, they recommend further trials with the varieties of American cotton known as 230 F. and 285 F. which are superior in staple, though not at present in yield and ginning percentage, to the 4 F. variety of which the Punjab American crop now almost entirely consists. These recommendations apply to tracts in which much botanical work has already been done, but there are large tracts which have been left practically untouched botanically. Hyderabad, which produces about one-seventh of the cotton grown in India, is one of these. Others are the Cocanada tract in Madras and the Dholleras tract in Bombay. Very little botanical work has been done on the indigenous cottons in the Punjab, on Cambodia in Madras or on the cottons of Burma. The Committee, therefore, recommend that botanical work in these tracts should be taken up at once and in earnest. They also recommend that the important work on cotton breeding, initiated by Mr. Leake at Cawnpore, should be further developed.

An increase in the outturn of cotton can be secured not only by an improvement in the variety grown but also by improvements in agricultural practice. The Report points out that the outturn of cleaned cotton to the acre in India is only 85 pounds, whereas in the United States it is 200 pounds, and that improvements in agricultural practice should very considerably reduce this difference. Detailed recommendations are made for each Province and Native State, the most important improvements advocated being the spread of the practice of sowing in lines and of interculture and the working out of suitable rotations including, wherever possible, heavy yielding leguminous fodder crops.

As regards the **organization of the Agricultural Department**, the Committee recommend a large increase in the number of seed farms in order to permit of the control of the selection and distribution of pure seed by the Department in the manner best suited to the local conditions of each tract. They consider that the demonstration of the usefulness of improved agricultural implements and of the advantages resulting from the use of manures and from good cultivation should ordinarily be carried out on the lands of selected cultivators, but that, where the establishment of large demonstration farms is considered desirable, an accurate profit and loss account should be maintained. As for the assistance to be given by the Agricultural Department to the cultivator in getting a better price for a superior product, the Committee recommend an extension of the system of auction sales of unginned cotton which have proved so successful in spreading the 4 F. variety of American cotton in the Punjab. They consider, however, that the Agricultural Department should not, in any one case, attempt to deal with more than 60,000 maunds of cotton, which would give it control over sufficient seed for 400,000 acres. After that, the sales should be handed over to other agencies but the Department would still be called upon for advice and assistance in regard

to such matters as grading, classification, and the settlement of disputes. The additions to the staff of the Agricultural Department recommended by the Committee for all these purposes, in addition to nine Botanists, an Entomologist for the United Provinces and an Imperial Mycologist, are one Director of Agriculture for Sind, thirteen Deputy Directors of Agriculture belonging to the Indian Agricultural Service and three Assistant Directors who would be members of the Provincial Agricultural Service. For Native States, the additions proposed are two Directors of Agriculture, two Deputy Directors and one Botanist. Both in British territory and in Native States, the subordinate staff would be increased proportionately.

Irrigational Problems—The possibilities of the extension of the cultivation of long staple cotton under irrigation in the cotton growing Provinces of North India—the Punjab, the North-West Frontier Province, the United Provinces and Sind—are examined in great detail in the Report. The Committee are very emphatically of opinion that Sind holds out greater possibilities than any other part of India for the growth of superior cotton and strongly recommend that the project for constructing a barrage across the Indus at Sukkur, which would ensure a perennial water supply to some 4½ million acres of land in that Province, should be carried out immediately. They estimate that this would mean an area of 660,000 acres under cotton, of which two-thirds should be cotton of longer staple than any at present grown in India and at least 1½ inches in length.

In the Punjab, the Committee anticipate a total of 465,000 acres under American cotton on existing canals in the course of two or three years, an increase of 189,000 acres on the area in 1917, and a further addition of 200,000 acres if three large projects, the Sutlej River Project, the Haveli Project and the Sind Sagar Doab Project, are carried out. Messrs. Wadia and Hodgkinson, however, hold that no irrigation project in the Punjab which may affect the supply of water in the Indus should be undertaken until the Sukkur Barrage Project has been carried out or until a decision that it should be abandoned has been arrived at. In the United Provinces, the Committee consider that the area under the Cawnpore American variety might increase from 2,000 acres to 135,000 acres under the Ganges and Agra Canals, provided a sufficiently high premium for it can be assured. They hold that there are some small possibilities for Punjab American in the North-West Frontier Province, for Cambodia in the east of the Central Provinces and for Cambodia or Upland Georgian on lands which formerly grew poppy in Central India. The cultivation of Cambodia under wells should spread in Madras. A thorough investigation of the possibilities of tube wells and of pump irrigation in the Punjab and the United Provinces is recommended. Broadly speaking, therefore, the extension of irrigation means the cultivation of more American cotton as, in the Peninsula, where the longer stapled indigenous varieties are grown, cotton is not irrigated except in the case of Cambodia under wells in Madras. The only recommendation in the Report in regard to the indigenous varieties under irrigation is that liberal Government loans (*takavi*) should be granted

for the construction of wells in North Gujarat where greatly increased yields have been obtained under such conditions.

Commercial Problems.—The main problem dealt with by the Committee in the second part of the Report is that of securing to the cultivation an adequate price for the pure or superior varieties of cotton grown as the outcome of the recommendations in the first part. With this object, the Committee recommend the establishment in other parts of India of open markets on the Berar system in which the purchaser of cotton should be able to see exactly what he is buying and to pay for it accordingly. The cotton tracts of the Bombay Presidency except Sind, and of the Madras Presidency except the Coconada tract and the Punjab Canal Colonies are considered specially suitable for the establishment of such markets. Other measures proposed are the publication of cotton prices in up-country markets in a way which would enable the cultivator to realise their true significance, an extension of the activities of co-operative sale societies and the standardization of weights on the basis of a cotton maund of 28 pounds, which would prevent the cultivator from being cheated by unscrupulous middlemen. More important than any of these recommendations is the proposal that all ginning and pressing factories should be licensed. The Report states that the malpractices from which the cultivator and the village money lender are responsible are of minor importance compared with those which are carried on in these factories and that it is in them that the bulk of the adulteration, mixing and damping, which have so injuriously affected the reputation of Indian Cotton, takes place. It is, therefore, recommended that all ginning factories to be erected hereafter should conform to the plan for a model factory published with the Report and that all ginning and pressing factories already in existence should be required to conform to the conditions laid down regarding the provision of sufficiently wide platforms for unginned cotton and lint, the paving of press houses and of the compounds of ginning factories, the maintenance of machinery in proper order, the submission of returns, the use of standard weights, the disposal of seed and so on. A preliminary to the issue of licenses would be the assignment to all factories of distinctive numbers and marks, which would enable the cotton dealt with by them to be traced. Licenses would only be issued to factories which conformed to the published plan or were brought up to the standard laid down and would be withdrawn for breach of the conditions mentioned above or on proof of such malpractices as damping, mixing, or adulteration. Complaints would be made by the sufferers and would be investigated by Committees on which the cotton trade would be adequately represented. In order still further to prevent the adulteration or mixing of waste or short staple cotton with long staple cotton, it is recommended that the transport of cotton waste by rail except from one spinning or weaving mill to another or to a port of shipment such as Bombay should be entirely prohibited as well as the transport by sea from one port to another. The transport by rail of cotton either ginned, or unginned, loose or in bales, would also be prohibited except to *bona fide* consumers such

as spinning or weaving mills or to ports for disposal there or shipment outside India. In cases in which this course would involve hard-ship transport under license is suggested.

Statistical Information.—The most important recommendations in regard to the improvement of cotton forecasts are that measures should be taken to impress upon the primary reporting agencies the meaning of the term 'normal' and its equivalent in annas, that the yield of cotton should invariably be reported in terms of unginned cotton, the necessary conversion into terms of ginned cotton and of the anna estimate into American notation being made in the office of the Provincial Director of Agriculture, that special care should be taken in estimating the outturn of cotton when grown with other crops and that more use should be made of non-official agencies such as large firms, large and small landholders and ginning factories. The Committee consider that a 'twelve-anna' crop should everywhere be regarded as representing a normal crop unless there are special reasons to the contrary. They also recommend that the work of submitting estimates of outturn should everywhere be handed over to the Agricultural Department as soon as possible and that the results obtained on Government farms should be utilized more largely than at present, especially for purposes of comparison with previous years and for ascertaining ginning percentages. They hold that the submission of returns of cotton ginned and pressed by ginning and pressing factories should be made compulsory by legislation, the penalty for failure being the withdrawal of the license of the factory.

Establishment of a Central Cotton Trade Association.—The Committee suggest not only the better organization of the Agricultural Department but also of the Cotton Trade. The way in which this is to be secured is by the establishment of a Central Cotton Trade Association in Bombay, to be known as the East India Cotton Association which, as far as the control of the cotton trade is concerned, will take the place of the seven distinct bodies representing different branches of the trade which were in existence at the time the Report was written and still exist, though the functions of two of the most important of them, the Bombay Cotton Trade Association and the Bombay Cotton Exchange, are at present exercised by the Cotton Contracts Board. It is intended that the East India Cotton Association should be the permanent successor of the latter. Mr. N. N. Wadia, a member of the Committee, was entrusted with the duty of drawing up a suitable scheme for the latter. This he did in consultation with the Directors of the Liverpool Cotton Association and Mr. N. S. Glazebrooke, Ex-Chairman of the Bombay Cotton Trade Association, and the scheme is at present under the consideration of the Government of India.

Establishment of a Central Cotton Committee.—Finally, the Committee make provision for much closer connexion between the Agricultural Department and the Cotton Trade. They point out the evils which have resulted in the past from the ignorance of the Agricultural Department and the trade of what the other was doing. It is proposed that the Central

Cotton Committee to which all connected with cotton, whether agriculturally or commercially, will be able to turn to for advice or assistance, should consist of about twenty members. The nine official members would be the Agricultural Adviser to the Government of India, who would be President, six agricultural experts working on cotton from the six great cotton growing Provinces, the Director General of Commercial Intelligence, and the Director of Statistics. The remaining members, with the exception of a representative of the Co-operative Department, who might be either an official or a non-official, would represent Chambers of Commerce and similar bodies and would also include a representative of Lancashire. The functions of the Committee would be almost entirely advisory but its advice would carry very great weight. It would be of special importance in connexion with legislation proposed on any matters connected with cotton, which would invariably be referred to it, and also in regard to the working of the system of licensing ginning and pressing factories. The penalty of the withdrawal of the license of an offending factory would only be inflicted upon its recommendation. It would assist the Provincial Agricultural Departments in obtaining authoritative valuations of new varieties of cotton and in getting accurate spinning tests carried out. For this purpose a Technologist would be added to its staff. The Committee would work to a large extent through

Provincial and Local Sub-Committees whose constitution would be similar to its own though they would be on a smaller scale. Great stress is laid on the necessity of obtaining a Secretary of first class organizing ability.

Cost of the proposals.—The cost of the additions to the staff of the Agricultural Department proposed by the Committee is estimated at Rs. 14 lakhs per annum. An annual grant of at least Rs. 2 lakhs per annum for the Central Cotton Committee is recommended in addition to this. It is suggested that funds might be provided, if considered desirable, by the imposition of a case of eight annas a bale on all cotton used in the mills in India or exported.

Action taken on the Report.—In a Resolution, dated August 2nd, 1919, the Government of India, whilst with a few exceptions, leaving to the discretion of Local Governments the adoption of the recommendations of the first part of the Report, desired them to lose no time in considering the recommendations in respect of additional appointments in the Agricultural Department. The Government of India stated that they were undertaking a detailed examination of the recommendations in the second part and that precedence would be given to the proposals for the formation of a Central Cotton Committee and to those for licensing ginning and pressing factories.

(For Cotton Cloth Control q. v.).

Banking.

Of the three Presidency Banks the Bank of Bengal which commenced business in the year 1806 is by far the oldest. It was followed by the Bank of Bombay in 1840 and by the Bank of Madras in 1843. A scheme is now under consideration to amalgamate the three Presidency Banks into an Imperial Bank.

To commence with and for some considerable time thereafter Government had a very large interest in all three Banks, holding as they did a large proportion of the share capital and having the right to nominate a number of the Directors. It was decided however in 1876 that this connection should cease and Government holding of shares was accordingly realised in that year and the right to be represented on the Directorates was given up at the same time. Government are still entitled, however, to audit the Banks' accounts at any time if they deem this necessary, to call for any information touching the affairs of the Banks and the production of any documents relative thereto, and may also require the publication of such statements of assets and liabilities at such intervals and in such form and manner as may be thought fit. The Banks' Agreements with Government are usually arranged for a period of ten years at a time and now-a-days provide for the most part for the carrying on at the head offices and branches of the ordinary banking business of Government in India and for the management and conduct in the three Presidency towns of the Government loans. The management of the Government Savings Bank was at one time entrusted to the Bank, but this was handed over to the Post Office in the year 1896.

Paper Currency.

The Banks had the right to issue currency notes until the year 1862; but in that year this privilege was withdrawn and to compensate the Banks for being deprived of this right, Government decided to deposit the whole of their balances at the Presidency towns with the Banks. This practice held good until the year 1876, when the Reserve Treasuries were formed; but since that year Government balances, which are all payable at call, have only been maintained at a figure sufficient to meet the demands of Government and sufficient also to compensate the Banks in part for the work of keeping the accounts. There are signs however that Government intend to adopt a more liberal policy in future in regard to the balances they maintain with the Presidency Banks. There is no definite undertaking on the part of Government to keep any balance with the Banks either at the head offices or branches; but there is a stipulation that in the event of the balance at the head office of each Bank falling below a certain stated figure, which varies in the case of each Bank, Government will pay interest on the deficit.

In order to assist Government in their attempts to encourage the use of currency notes throughout India the Banks have recently undertaken to issue and encash on behalf of

Government universal Currency notes for the public freely at most of their Branches and in consideration of their having undertaken this work Government have, it is understood, agreed to maintain certain minimum balances, at such Branches so long as they are entrusted with this work.

Government Deposits.

The following statement shows the Government deposits with each Bank at various periods during the last 40 years or so:—

In Lakhs of rupees.

—	Bank of Bengal.	Bank of Bombay.	Bank of Madras.	Total.
30 June				
1881 ..	230	61	53	344
1886 ..	329	82	39	450
1891 ..	332	97	53	482
1896 ..	225	88	57	370
1901 ..	187	90	63	340
1906 ..	186	93	46	325
1911 ..	198	129	77	404
1912 ..	210	155	75	440
1913 ..	247	167	68	482
1914 ..	290	197	93	580
1915 ..	263	187	102	552
1916 ..	336	263	115	714
1917 ..	1338	716	209	2263
1918 ..	664	549	213	1426
1919 ..	346	298	142	786

General Banking Business.

This is regulated by the Presidency Banks Act, 1876, under which Act all three Banks are now working. The various descriptions of business which the Banks may transact are clearly laid down in Sec. 36 of the Act, and it is expressly provided in Sec. 37 that the Banks shall not transact any kind of banking business other than those sanctioned in Sec. 36. Briefly stated the main classes of business which the Banks may engage in are as follows:—

- (1) Investing of money in any securities of the Government of India or of the United Kingdom of Great Britain and Ireland, the stock or debentures of, or shares in Railways bearing a Government guarantee in respect of interest and the debentures and securities of any Municipal body or Port Trust in India or of the Bombay Improvement Trust and the altering, converting and transposing of such investments.
- (2) Advancing of money against any of the securities specified above or against bullion or other goods which or the

documents of title to which are deposited with or assigned to the Bank as security.

- (3) Advancing of money against accepted bills of Exchange and promissory notes.
- (4) Drawing, discounting, buying and selling of bills of exchange and other negotiable securities payable in India or Ceylon.
- (5) Receiving deposits.
- (6) Receiving securities for safe custody and realisation of interest, &c., from constituents of the Bank.
- (7) Buying and selling of gold and silver, whether coined or uncoined.
- (8) Transacting pecuniary agency business on commission.

The principal restrictions placed on the business of the Banks are as follows :—

- (1) The drawing, discounting, buying and selling of bills of exchange and other negotiable securities is *confined* to bills and securities payable in India and Ceylon.
- (2) Borrowing of money is only permitted in India.
- (3) Loans or advances upon mortgage of in any other manner upon the security

of any immovable property or the documents of title relating thereto is expressly prohibited.

- (4) The amount which may be advanced to any individual or partnership by way of discount or on personal security is limited to an amount prescribed in the Bye-Laws of the Banks, such Bye-Laws having previously been approved by Government.
- (5) Loans or advances cannot be granted for a longer period than six months at a time.
- (6) Discounts cannot be made or advances on personal security be given, unless such discounts or advances carry with them the several responsibilities of at least two persons or firms unconnected with each other in general partnership.

Various representations have been made to Government by the Banks to have certain of these restrictions withdrawn, particularly those referred to under Nos. 1 and 2, which latter effectually prevent the Banks from doing anything in the nature of exchange business and from having access to the London money market for borrowing purposes. The Government of India were prepared to meet the Banks wishes in the above connection to a great extent in the year 1903; but the Secretary of State did not approve of the Government proposals, and they were finally negated in 1906.

Government Deposits.

The proportions which Government deposits have borne from time to time to the total Capital Reserve and deposit of the three Banks are shown below :—

In Lakhs of Rupees.

—	1 Capital.	2 Reserve.	3 Government deposits.	4 Other deposits.	Proportion of Government deposits to 1, 2, 3 & 4.
31st December.					
1891	350	97	297	1412	13·7 per cent.
1896	350	158	299	1292	14·2 "
1901	360	213	340	1463	14·3 "
1906	360	279	307	2745	8·3 "
1907	360	294	335	2811	8·8 "
1908	360	309	325	2861	8·4 "
1909	360	318	319	3265	7·4 "
1910	360	331	423	3234	9·7 "
1911	360	340	438	3419	9·6 "
1912	375	361	426	3578	9·0 "
1913	375	370	587	3644	11·8 "
1914	375	386	561	4002	10·5 "
1915	375	369	487	3860	9·5 "
1916	375	358	520	4470	9·0 "
1917	375	363	771	6771	9·3 "
1918	375	340	864	5097	12·9 "

The Banks have also the management of the debt of a number of the Municipalities, Port Trusts and Improvement Trusts throughout India.

Government policy in regard to the disposal of their surplus treasury balances in India has been strongly criticised at various times during the last thirty years or so, and it has been argued that the high rates of interest which are so common a feature in India when the crops come to be marketed are to a very large extent due to Government action in withdrawing money from the market when it is most needed and locking it up in the Reserve Treasuries. This question was considered at some length by the Royal Commission on Indian Finance and Currency q. v. which arrived at the conclusion that the present methods of dealing with the balances were open to criticism. The Commission further stated that the most obvious remedy would be to close the Reserve Treasuries and place the whole of the Government balances in the Presidency towns with the Presidency Banks; but their final recommendation in this connection was that Govern-

ment should make loans from their balances to the Presidency Banks—such loans to be within the absolute discretion of Government and to be granted only on good security and for short periods. It is not known how far the Government of India are prepared to accept the Commission's recommendation in this respect.

The question of the establishment of a State Bank was considered at some length by the Commission and a considerable mass of evidence was taken on this point. The opinions offered were however very conflicting, and although a draft scheme for such a Bank was drawn up by two of the Members of the Commission, the Commission as a whole finally came to the conclusion that they were not in a position to make recommendations one way or the other on the question of a State Bank. The whole question will no doubt receive full consideration after the war.

Recent Progress.

The following statements shew the progress made by the three Banks within recent years:—
In Lakhs of Rupees.

* BANK OF BENGAŁ.

	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
31st December.							
1895	200	68	184	677	422	132	10 per cent.
1900	200	103	155	582	243	136	11 "
1905	200	140	167	1204	396	181	12 "
1906	200	150	160	1505	528	149	12 "
1907	200	157	187	1573	460	279	12 "
1908	200	165	178	1575	507	349	13 "
1909	200	170	168	1760	615	411	14 "
1910	200	175	198	1609	514	368	14 "
1911	200	180	270	1677	729	321	14 "
1912	200	185	234	1711	665	310	14 "
1913	200	191	301	1824	840	319	14 "
1914	200	200	287	2160	1169	621	16 "
1915	200	*204	265	1978	785	793	16 "
1916	200	*213	274	2143	772	768	16 "
1917	200	†221	448	2934	1482	773	17 "
1918	200	†189	584	2392	894	779	17 "

* Includes Rs. 63 lakhs as a reserve for depreciation of investments.

†	67	"	"	"	"	"
†	25	"	"	"	"	"

BANK OF BOMBAY.

1895	100	51	76	358	228	105	11 per cent
1900	100	70	87	432	129	89	11 "
1905	100	87	92	676	259	158	12 "
1906	100	92	101	832	354	177	12 "
1907	100	96	112	821	324	164	13 "
1908	100	101	94	832	377	149	13 "
1909	100	103	120	1035	415	163	13 "
1910	100	105	152	1053	436	149	14 "
1911	100	106	107	1104	463	208	14 "
1912	100	106	117	1124	315	210	14 "
1913	100	106	200	1015	477	232	14 "
1914	100	110	183	1081	646	202	15 "
1915	100	100	136	1679	423	276	15 "
1916	100	90	142	1367	667	312	15 "
1917	100	92	235	2817	1398	744	17½ "
1918	100	101	177	1749	542	353	18½ "

BANK OF MADRAS.

—	Capital.	Reserve.	Govt. deposits.	Other deposits.	Cash.	Investments.	Dividend for year.
1895	50	16	45	278	144	45	10 per cent.
1900	60	22	35	260	82	67	8 "
1905	60	30	41	344	140	71	10 "
1906	60	32	54	355	151	81	10 "
1907	60	36	35	416	162	84	10 "
1908	60	40	52	447	153	84	11 "
1909	60	44	49	500	141	79	12 "
1910	60	48	72	567	184	85	12 "
1911	60	52	59	625	165	104	12 "
1912	75	70	75	743	196	113	12 "
1913	75	73	86	805	219	117	12 "
1914	75	76	91	761	267	134	12 "
1915	75	65	83	803	256	184	12 "
1916	75	55	104	960	286	161	12 "
1917	75	50	87	1020	496	94	12 "
1918	75	50	102	954	271	139	12 "

Note.—(The Banks have power under Sec. 36 (i) to draw Bills of Exchange payable out of India under certain stated circumstances, but this permission is of comparatively little importance.)

Branches.

BANK OF BENGAL.

Calcutta—

Harrison Road, Clive Street & Park Street.

Agra, Akyab, Allahabad, Benares, Cawnpore, Chittagong, Dacca, Delhi, Hyderabad Decan, Jalpaiguri, Lahore, Lucknow, Moulmein, Nagpore, Naraingunge, Patna, Rangoon, Secunderabad, Simla.

Pay Offices.

Chandpore, Serajunge and Bombay (Agency).

Bombay—

Byculla, Mandvi and Sandhurst Road, Ahmedabad, Ahmedabad City (Sub Branch), Akola, Amraoti, Broach, Hyderabad (Sind), Indore, Jalgaon, Karachi, Poona, Quetta, Rajkot, Sholapur, Sukkur and Surat.

BANK OF MADRAS.

Alleppy, Bangalore, Bellary, Bimlipatam, Calicut, Coconada, Cochin, Coimbatore, Colombo, Guntur, Madura, Mangalore, Masulipatam, Negapatam, Ootacamund, Salem, Tellicherry Trichinopoly, Trivandrum and Tuticorin.

Out Stations.

Bezwada, Erode, Narsapur, Rajahmundry and Vizianagram.

THE EXCHANGE BANKS.

The Banks carrying on Exchange business in India are merely branch agencies of Banks having their head offices in London, on the Continent, or in the Far East and the United States. Originally their business was confined almost exclusively to the financing of the external trade of India; but in recent years most of them, while continuing to finance this part of India's trade, have also taken an active part in the financing of the internal portion also at the places where their branches are situated.

At one time the Banks carried on their operations in India almost entirely with money borrowed elsewhere, principally in London—the home offices of the Banks attracting deposits for use in India by offering rates of interest much higher than the English Banks were able to quote. Within recent years however it has been discovered that it is possible to attract deposits in India on quite as favourable terms as can be done in London and a very large proportion of the financing done by the Exchange Banks is now carried through by means of money actually borrowed in India. No information is available as to how far each Bank has secured deposits in India but the following statement published by the Director-General of Statistics in India shows how rapidly such deposits have grown in the aggregate within recent years.

TOTAL DEPOSITS OF ALL EXCHANGE BANKS
SECURED IN INDIA.

In Lakhs of Rupees.

1895	1030
1900	1050
1901	1183
1902	1370
1903	1614
1904	1632
1905	1704
1906	1808
1907	1917
1908	1951
1909	2027
1910	2479
1911	2816
1912	2953
1913	3103
1914	3014
1915	3354
1916	3803
1917	5337

Exchange Banks' Investments.

Turning now to the question of the investment of the Banks' resources, so far as it concerns India, this to a great extent consists of the purchase of bills drawn against imports and exports to and from India.

The financing of the import trade originated and is carried through however for the most

part by Branches outside of India, the Indian Branches' share in the business consisting principally in collecting the amount of the bills at maturity and in furnishing their other branches with information as to the means and standing of the drawees of the bills, and it is as regards the export business that the Indian Branches are more immediately concerned. The Exchange Banks have practically a monopoly of the expert finance in India and in view of the dimensions of the trade which has to be dealt with the Banks would under ordinary circumstances require to utilise a very large proportion of their resources in carrying through the business. They are able however by a system of rediscount in London to limit the employment of their own resources to a comparatively small figure in relation to the business they actually put through. No definite information can be secured as to the extent to which rediscounting in London is carried on but the following figures appearing in the balance sheets dated 31st December 1917 of the undernoted Banks will give some idea of this.

LIABILITY ON BILLS OF EXCHANGE RE-DISCOUNTED AND STILL CURRENT.

	£
Chartered, Bank of India Australia and China.	3,942,000
Eastern Bank, Ltd.	569,000
Hongkong and Shanghai Banking Corporation.	5,475,000
Mercantile Bank of India, Ltd. ..	2,245,000
National Bank of India, Ltd. . .	2,838,000
	15,069,000

The above figures do not of course relate to re-discounts of Indian bills alone, as the Banks operate in other parts of the world also, but it may safely be inferred that bills drawn in India form a very large proportion of the whole.

The following is a statement of the position of the various Exchange Banks carrying on business in India as at 31st December 1918.

In Thousands of £.

	Capital.	Reserve.	Deposits.	Cash and Investment.
Chartered Bank of India Austria & China.	1200	2000	33777	9499
Comptoir National D' Escompte de Paris.	8000	1740	80908	12756
Eastern Bank, Ltd.	600	90	5784	2312
Hongkong & Shanghai Banking	1500	3600	34117	11436
Imperial Bank of Persia	650	320	1789	4760
International Banking Corpn.	650	1162	11958	4198
Mercantile Bank of India	562	700	12370	3710
National Bank of India, Ltd.	1000	1350	27517	7953
National Bank of South Africa	2965	1050	40321	13461
Russo Asiatic Bank (1915)	4745	2500	48200	11260
Yokohama Specie Bank	4200	2765	54617	25603
Sumitomo Bank	2250	450	26998	6625
Bank of Taiwan	2500	653	42807	12855

The bills against exports are largely drawn at three months' sight and may either be "clean" or be accompanied by the documents relating to the goods in respect of which they are drawn. Most of them are drawn on well known firms at home or against credits opened by Banks or financial houses in England and bearing as they do an Exchange Bank endorsement they are readily taken up by the discount houses and Banks in London. Any bills purchased in India are sent home by the first possible Mail so that presuming they are rediscounted as soon as they reach London the Exchange Banks are able to secure the return of their money in about 16 or 17 days instead of having to wait for three months which would be the case if they were unable to rediscount. It must not be assumed however that all bills are rediscounted as soon as they reach London as at times it suits the Banks to hold up the bills in anticipation of a fall in the London discount rate while on occasions also the Banks prefer to hold the bills on their own account as an investment until maturity.

The Banks place themselves in funds in India for the purpose of purchasing export bills in a variety of ways of which the following are the principal:—

- (1) Proceeds of import bills as they mature.
- (2) Sale of drafts and telegraphic transfers payable in London and elsewhere out of India.
- (3) Purchase of Council Bills and Telegraphic Transfers payable in India from the Secretary of State.
- (4) Imports of bar gold and silver bullion.
- (5) Imports of sovereigns from London, Egypt or Australia.

The remaining business transacted by the Banks in India is of the usual nature and need not be given in detail.

JOINT STOCK BANKS.

Previous to 1906 there were few Banks of this description operating in India, and such as were then in existence were of comparatively small importance and had their business confined to a very restricted area. The rapid development of this class of Bank, which has been so marked a feature in Banking within recent years, really had its origin in Bombay and set in with the establishment of the Bank of India and the Indian Specie Bank in 1906. After that time there was a perfect stream of new flotations, and although many of the new Companies confined themselves to legitimate banking business, on the other hand a very large number engaged in other businesses in addition and can hardly be properly classed as Banks.

These Banks made very great strides during the first few years of their existence, but it was generally suspected in well informed circles that the business of many of the Banks was

of a very speculative and unsafe character and it was a matter of no great surprise to many people when it became known that some of the Banks were in difficulties.

The first important failure to take place was that of the People's Bank of India and the loss of confidence caused by the failure of that Bank resulted in a very large number of other failures, the principal being that of the Indian Specie Bank.

The public have for the time being lost much of their confidence in this class of Bank and deposits to a very large extent have been withdrawn and it is feared that a large portion of the money has gone back into hoards. This is very unfortunate as many of the Banks, particularly the older established concerns, have always been recognised as being conducted on safe and prudent lines.

The following shows the position of the better known existing Banks as it appears in the latest available Balance Sheets :—

In Lakhs of Rupees.

—	Capital.	Reserve.	Deposits.	Cash and Investments.
Allahabad Bank, Ltd.	30	41	724	222
Alliance Bank of Simla, Ltd.	88	50	1272	557
Bank of Baroda, Ltd.	20	11	204	74
Bank of India, Ltd.	50	13	675	237
Bank of Mysore, Ltd.	10	3	74	27
Central Bank of India, Ltd.	33	11	773	403
Madras Bank, Ltd.	10	2	29	10
Karachi Bank, Ltd.	2	..	7	1
National Financing and Commission Corporation, Ltd.	10	1	63	27
Oudh Commercial Bank, Ltd.	5	3	7	1
Punjab National Bank, Ltd.	16	13	223	109
Tata Industrial Bank, Ltd.	75	....	583	235

The principal Banks which have gone into liquidation during the last three or four years are given below along with a Statement of their Capital Reserve and deposits as at the date of the latest available Balance Sheets :—

In Lakhs of Rupees.

—	Capital.	Reserve.	Deposits.
Bank of Upper India (1912)	10	9	191
Bombay Banking Co.	1	..	15
Credit Bank of India, Ltd.	10	..	51
Deccan Bank, Ltd.	1	..	11
Indian Specie Bank, Ltd.	75	15	270
Kathiawad and Ahmedabad Banking Corporation	7	..	23
Lahore Bank, Ltd. (1912)	1	..	28
People's Bank of India, Ltd.	12	2	127
Punjab Co-operative Bank, Ltd. (1912)	7	2	60
The Pioneer Bank	3-84	..	1·96
Standard Bank, Ltd.	10	..	4

Growth of Joint Stock Banks.

The following figures appearing in the Report of the Director-General of Statistics shows the growth of the Capital, Reserve and Deposits of the principal Joint Stock Banks registered in India :—

In Lakhs of rupees.				
Capital.	Reserve.	Deposits.		
1870 ..	9	1	13	
1875 ..	14	2	27	
1880 ..	18	3	63	
1885 ..	18	5	94	
1890 ..	33	17	270	
1895 ..	63	31	566	

Capital.	Reserve.	Deposits.		
1900 ..	82	45	807	
1905 ..	84	77	1198	
1906 ..	133	56	1155	
1907 ..	229	63	1400	
1908 ..	239	69	1626	
1909 ..	266	87	2049	
1910 ..	275	100	2565	
1911 ..	285	126	2529	
1912 ..	291	134	2725	
1913 ..	231	132	2259	
1914 ..	251	141	1710	
1915 ..	281	156	1787	
1916 ..	287	173	2471	
1917 ..	303	162	3117	

AGENTS IN INDIA OF LONDON BANKS.

Names of London Offices, Agents or Correspondents of certain Banks and Firms (doing banking business) in India.

Name of Bank.	London Office—Agents or Correspondents.	Address.
<i>Presidency Banks.</i>		
Bank of Bengal	Bank of England Courtts & Co. Lloyds Bank, Limited Samuel Montagu & Co.	Threadneedle Street, E.C. 2. 440, Strand, W. C. 2. 71, Lombard Street, E.C.3. 60, Old Broad Street, E.C.2.
Bank of Bombay	Courtts & Co. Samuel Montagu & Co.	440, Strand, W. C. 2. 60, Old Broad Street, E.C.2.
Bank of Madras	Bank of England National Provincial & Union Bank of England, Limited Samuel Montagu & Co.	Threadneedle Street, E.C.2. 15, Bishop's Gate, E.C. 2. 60, Old Broad Street, E.C.2.
<i>Other Banks & Kindred Firms.</i>		
Alliance Bank of Simla	Boulton Brothers & Co. London County Westminster & Paris Bank, Limited Barclays Bank, Limited Samuel Montagu & Co.	39, Old Broad Street, E.C.2. 41, Lothbury, E. C. 2. 54, Lombard Street, E.C.3. 60, Old Broad Street, E.C.2.
Tata Industrial Bank	Lloyds Bank, Limited	71, Lombard Street, E.C. 3.
Allahabad Bank, Limited	National Provincial & Union Bank of England, Limited Samuel Montagu & Co.	15, Bishop Gate, E. C. 2. 60, Old Broad Street, E.C.2.
Central Bank of India, Ltd.	London Joint City & Midland Bank, Limited	5, Threadneedle Street, E.C. 2.
Bank of Baroda	The Eastern Bank, Ltd.	4, Crosby Sq., E. C. 3.
Bank of Mysore	Ditto	Ditto.
Grindlay & Co.	London Office	54, Parliament Street.
Thomas Cook & Son .. .. .	.....	Ludgate Circus, E. C. 4.
King Hamilton & Co. (Calcutta)	Henry S. King & Co.	65, Cornhill E. C. 3.
King King & Co. (Bombay)	Ditto	Ditto.

Names of London Offices, Agents or Correspondents of certain Banks and Firms (doing Banking business) in India.

Name of Bank.	London Office—Agents or Correspondents.	Address.
<i>Exchange Banks.</i>		
Eastern Bank	4, Crosby Sq., E. C. 3.
Cox & Co.	16, Charing Cross, S. W. 1.
Mercantile Bank of India, Ltd.	15, Grace Church St., E.C.3
Chartered Bank of India, Australia and China	38, Bishop's Gate, E. C. 2.
National Bank of India	26, Bishop's Gate, E. C. 2.
Hongkong & Shanghai Banking Corporation	9, Grace Church, St., E.C.3.
Yokohama Specie Bank	7, Bishop's Gate, E. C. 2.
Bank of Taiwan	58, Old Broad St., E.C. 2.
Comptoir National d'Escompte de Paris	8-13, King William St., E.C.
Russo-Asiatic Bank	4.
International Banking Corporation	64, Old Broad St., E. C. 2.
		36, Bishop's Gate, E. C. 2.

NATIVE PRIVATE BANKERS AND SHROFFS.

Native private Bankers and Shroffs flourished in India long before Joint Stock Banks were ever thought of, and it seems likely that they will continue to thrive for some very considerable time to come. The use of the word "Shroff" is usually associated with a person who charges usurious rates of interest to impecunious people, but this is hardly fair to the people known as "shroffs" in banking circles, as there is no doubt that the latter are of very real service to the business community and of very great assistance to Banks in India. Under present conditions the Banks in India can never hope to be able to get into sufficiently close touch with the affairs of the vast trading community in India to enable them to grant accommodation to more than a few of these traders direct, and it is in his capacity as middleman that the shroff proves of such great service. In this capacity also he brings a very considerable volume of business within the scope of the Presidency Banks Act, and enables the Presidency Banks to give accommodation which, without his assistance, the Banks would not be permitted to give. The shroff's position as an intermediary between the trading community and the Banks usually arises in something after the following manner. A Shopkeeper in the bazaar, with limited means of his own, finds that, after using all his own money, he still requires say Rs. 25,000 to stock his shop suitably. He thereupon approaches the shroff, and the latter after very careful inquiries as to the shopkeeper's position grants the accommodation, if he is satisfied that the business is safe. The business, as a rule, is arranged through a hoondie broker, and in the case referred to the latter may probably approach about ten shroffs and secure accommodation from them to the extent of Rs. 2,500 each. A hoondie usually drawn at a currency of about 2 months is almost invariably taken by the shroffs in respect of such advances.

A stage is reached however when the demands on the shroffs are greater than they are able to

meet out of their own money, and it is at this point that the assistance of the Banks is called into requisition. The shroffs do this by taking a number of the bills they already hold to the Banks for discount under their endorsement, and the Banks accept such bills freely to an extent determined in each case by the standing of the shroff and the strength of the drawers. The extent to which any one shroff may grant accommodation in the bazaar is therefore dependent on two factors, viz., (1) the limit which he himself may think it advisable to place on his transactions, and (2) the extent to which the Banks are prepared to discount bills bearing his endorsement. The shroffs keep in very close touch with all the traders to whom they grant accommodation, and past experience has shewn that the class of business above referred to is one of the safest the Banks can engage in.

The rates charged by the shroffs are usually based on the rates at which they in turn can discount the bills with the Banks and necessarily vary according to the standing of the borrower and with the season of the year. Generally speaking, however, a charge of two annas per cent. per mensem above the Bank's rate of discount, or $1\frac{1}{2}\%$, is a fair average rate charged in Bombay to a first class borrower. Rates in Calcutta and Madras are on a slightly higher scale due in a great measure to the fact that the competition among the shroffs for business is not so keen in these places as it is in Bombay.

The shroffs who engage in the class of business above described are principally Marwaries and Multanis having their head Offices for the most part in Bikanir and Shikarpur, respectively, the business elsewhere than at the Head Offices being carried on by "Moonims" who have very wide powers.

It is not known to what extent native bankers and shroffs receive deposits and engage in exchange business throughout India, but there is no doubt that this is done to a very considerable extent.

THE BANK RATE.

Each Presidency Bank fixes its own Bank rate, and the current rate of each Bank determines to a great extent the rates for all important classes of business within the Bank's sphere of influence. The rates in the three Presidencies are not always uniform, but it seldom happens that a difference of more than 1½% exists, more particularly as regards Bombay and Bengal, which seem to be in closer touch with each other than appears to be the case with Madras.

The rate fixed represents the rate charged by the Banks on demand loans against Government securities only and advances on other securities or discounts are granted as a rule at a slightly higher rate. Ordinarily such advances or discounts are granted at from one-half to one per cent. over the official rate; but this does not always apply and in the monsoon months, when the Bank rate is sometimes nominal, it often happens that such accommodation is granted at the official rate or even less.

The following statement shews the average Bank rate of each Bank since 1881:—

Year.	Bank of Bombay.			Bank of Bengal.			Bank of Madras.		
	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.	1st Half-year.	2nd Half-year.	Yearly average.
1884 ..	9·03	4·17	6·60	8·813	3·946	6·379	8·42	4·13	6·27
1885 ..	5·90	4·00	4·95	6·757	4·005	5·381	5·71	3·23	4·47
1886 ..	6·35	6·50	6·42	5·923	6·152	6·037	5·48	5·64	5·56
1887 ..	7·78	3·73	5·75	7·475	3·804	5·639	7·92	3·90	5·91
1888 ..	5·90	5·51	5·70	5·736	5·185	5·460	5·78	5·44	5·61
1889 ..	9·46	4·00	6·73	9·309	4·674	6·991	9·62	4·14	6·88
1890 ..	9·21	3·28	6·24	8·265	3·315	5·790	8·14	3·32	5·73
1891 ..	3·88	2·23	3·05	3·502	2·622	3·062	3·60	2·25	2·92
1892 ..	3·97	3·04	3·50	3·884	3·114	3·499	4·03	3·07	3·55
1893 ..	5·97	3·84	4·90	5·685	4·076	4·880	6·19	4·36	5·27
1894 ..	7·55	3·46	5·50	7·425	3·364	5·394	6·72	3·31	5·01
1895 ..	4·30	3·60	3·95	5·066	3·592	4·329	5·02	3·50	4·26
1896 ..	5·85	5·10	5·47	5·774	5·608	5·691	6·00	5·28	5·64
1897 ..	10·11	5·64	7·87	9·884	5·967	7·925	9·97	6·00	7·98
1898 ..	12·03	4·55	8·29	11·016	5·114	8·065	11·09	4·51	7·80
1899 ..	6·34	5·42	5·88	6·337	5·494	5·915	6·27	5·83	6·05
1900 ..	6·9	3·79	5·34	6·414	4·272	5·343	7·24	4·50	5·87
1901 ..	7·07	3·83	5·45	6·895	4·070	5·482	7·57	4·09	5·83
1902 ..	6·25	3·43	4·84	6·176	3·549	4·862	7·	4·02	5·51
1903 ..	6·7	3·48	5·09	6·265	3·494	4·879	7·13	4·27	5·70
1904 ..	5·15	3·82	4·48	5·560	4·190	4·875	6·42	4·07	5·24
1905 ..	5·77	4·42	5·09	5·558	4·630	5·094	6·04	4·19	5·11
1906 ..	7·24	5·28	6·26	6·950	5·885	6·417	7·15	5·04	6·09
1907 ..	7·81	4·11	5·96	7·635	4·576	6·105	8·24	4·54	6·39
1908 ..	7·84	4·02	5·93	7·417	4·244	5·830	8·38	4·38	6·38
1909 ..	6·47	3·82	5·14	6·580	3·907	5·243	7·55	4·41	5·98
1910 ..	6·19	4·14	5·16	6·143	4·510	5·326	7·17	4·65	5·91
1911 ..	6·55	3·52	5·03	6·657	4·358	5·507	7·59	4·35	5·97
1912 ..	6·01	4·10	5·05	6·242	4·592	5·417	7·51	4·59	6·05
1913 ..	7·23	4·62	5·92	6·569	5·331	5·950	7·76	5·54	6·65
1914 ..	5·52	5·28	5·40	5·939	4·961	5·450	6·63	5·16	5·89
1915 ..	5·84	5·30	5·57	5·839	5·543	5·691	5·87	5·54	5·70
1916 ..	7·18	5·65	6·41	7·252	6·321	6·786	7·71	6·48	7·09
1917 ..	6·70	5·42	6·06	6·690	5·364	6·027	8·	6·64	7·32
1918 ..	5·79	....	....	5·773	....	....	6·92	....	....
1919 ..	6·28	5·29	5·54	6·243	5·298	5·435	7·31	6·47	6·69

BANKERS' CLEARING HOUSES.

The principal Clearing Houses in India are those of Calcutta, Bombay, Madras, and Karachi, and of these the first two are by far the most important. The members at these places consist of the Presidency Banks, most of the Exchange Banks and English Banking Agency firms, and a few of the better known of the local Joint Stock Banks. No Bank is entitled to claim to be a member as of right and any application for admission to a Clearing must be proposed and seconded by two members and be subject thereafter to ballot by the existing members.

The duties of settling Bank are undertaken by the Presidency Bank at each of the places mentioned and a representative of each member attends at the office of that Bank on each business day at the time fixed to deliver all cheques he may have negotiated on other members

and to receive in exchange all cheques drawn on him negotiated by the latter. After all the cheques have been received and delivered the representative of each Bank advises the settling Bank of the difference between his total receipts and deliveries and the settling Bank thereafter strikes a final balance to satisfy itself that the totals of the debtor balances agrees with the total of the creditor balances. The debtor Banks thereafter arrange to pay the amounts due by them to the settling Bank during the course of the day and the latter in turn arranges to pay on receipt of those amounts the balances due to the creditor Banks. In practice however all the members keep Bank accounts with the settling Bank so that the final balances are settled by cheques and book entries thus doing away with the necessity for cash in any form.

The figures for the Clearing Houses in India above referred to are given below :—

Total amount of Cheques Cleared Annually.

In lakhs of Rupees.

— —				Calcutta.	Bombay.	Madras.	Karachi.	Total.
1901	..	..	..	Not available	6,511	1,338	178	8,027
1902	..	..	..	....	7,013	1,295	268	8,576
1903	..	..	..	....	8,762	1,464	340	10,566
1904	..	..	..	....	9,492	1,536	365	11,393
1905	..	..	..	....	10,927	1,560	324	12,811
1906	..	..	..	....	10,912	1,583	400	12,895
1907	..	..	..	22,444	12,645	1,548	530	37,167
1908	..	..	..	21,281	12,585	1,754	643	36,263
1909	..	..	..	19,776	14,375	1,948	702	36,801
1910	..	..	..	22,238	13,652	2,117	755	41,762
1911	..	..	..	25,763	17,605	2,083	762	46,213
1912	..	..	..	28,831	20,831	1,152	1,159	52,835
1913	..	..	..	33,133	21,890	2,340	1,219	58,582
1914	..	..	..	28,031	17,696	2,127	1,315	49,169
1915	..	..	..	32,266	16,462	1,887	1,352	51,967
1916	..	..	..	48,017	24,051	2,495	1,503	76,066
1917	..	..	..	47,193	33,655	2,339	2,028	85,215
1918	..	..	..	74,397	53,362	2,528	2,429	1,32,716

TABLE OF WAGES, INCOME, &c.

Showing the amount for one or more days at the rates of 1 to 16 Rupees per Month of 31 Days.

Rupees.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Days.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.	Rs. a. p.
1	0 0 60	1 0 0	1 60	2 00	2 60	3 10	3 70	4 10	4 70	5 10	5 80	6 20	6 90	7 30	7 90	8 30
2	0 1 00	2 00	3 10	4 10	5 10	6 20	7 20	8 30	9 30	10 30	11 40	12 40	13 50	14 50	15 50	16 50
3	0 1 60	3 10	4 70	6 20	7 80	9 30	10 10	12 40	13 11	14 71	16 31	17 91	19 51	21 11	22 71	24 31
4	0 2 00	4 10	6 20	8 30	10 30	12 40	14 51	16 51	18 11	19 71	21 31	23 31	25 31	27 31	29 31	31 31
5	0 2 60	5 10	7 80	10 30	12 10	15 51	18 11	20 11	22 11	24 11	26 11	28 11	30 11	32 11	34 11	36 11
6	0 3 10	6 20	9 30	12 40	15 51	18 11	20 11	22 11	24 11	26 11	28 11	30 11	32 11	34 11	36 11	38 11
7	0 3 70	7 20	10 10	14 51	18 11	20 11	22 11	24 11	26 11	28 11	30 11	32 11	34 11	36 11	38 11	40 11
8	0 4 10	8 30	12 41	16 51	20 11	22 11	24 11	26 11	28 11	30 11	32 11	34 11	36 11	38 11	40 11	42 11
9	0 4 70	9 30	13 11	17 21	21 11	23 11	25 11	27 11	29 11	31 11	33 11	35 11	37 11	39 11	41 11	43 11
10	0 5 10	10 30	15 51	20 11	24 11	28 11	32 11	36 11	40 11	44 11	48 11	52 11	56 11	60 11	64 11	68 11
11	0 5 80	11 41	1 01	6 81	12 42	18 43	24 44	30 45	36 46	42 47	48 48	54 49	60 50	66 51	72 52	78 53
12	0 6 20	12 51	2 61	8 91	14 12	20 13	26 14	32 15	38 16	44 17	50 18	56 19	62 20	68 21	74 22	80 23
13	0 6 80	13 51	3 41	10 10	16 11	22 12	28 13	34 14	40 15	46 16	52 17	58 18	64 19	70 20	76 21	82 22
14	0 7 20	14 51	4 21	11 10	17 11	23 12	29 13	35 14	41 15	47 16	53 17	59 18	65 19	71 20	77 21	83 22
15	0 7 80	15 61	5 11	12 11	18 12	24 13	30 14	36 15	42 16	48 17	54 18	60 19	66 20	72 21	78 22	84 23
16	0 8 31	1 01	6 82	1 02	9 33	15 34	21 35	27 36	33 37	39 38	45 39	51 40	57 41	63 42	69 43	75 44
17	0 8 91	1 61	10 32	1 62	11 10	17 11	23 12	29 13	35 14	41 15	47 16	53 17	59 18	65 19	71 20	77 21
18	0 9 31	2 61	11 10	2 61	12 11	18 12	24 13	30 14	36 15	42 16	48 17	54 18	60 19	66 20	72 21	78 22
19	0 9 91	3 71	13 42	3 71	13 42	19 43	25 44	31 45	37 46	43 47	49 48	55 49	61 50	67 51	73 52	79 53
20	0 10 31	4 71	14 11	4 71	14 11	20 12	26 13	32 14	38 15	44 16	50 17	56 18	62 19	68 20	74 21	80 22
21	0 10 91	5 82	0 62	11 43	17 44	23 45	29 46	35 47	41 48	47 49	53 50	59 51	65 52	71 53	77 54	83 55
22	0 11 41	6 82	2 02	13 43	19 44	25 45	31 46	37 47	43 48	49 49	55 50	61 51	67 52	73 53	79 54	85 55
23	0 11 101	7 82	3 62	15 44	21 45	27 46	33 47	39 48	45 49	51 50	57 51	63 52	69 53	75 54	81 55	87 56
24	0 12 41	8 92	5 13	16 44	22 45	28 46	34 47	40 48	46 49	52 50	58 51	64 52	70 53	76 54	82 55	88 56
25	0 12 101	9 92	6 23	17 44	23 45	29 46	35 47	41 48	47 49	53 50	59 51	65 52	71 53	77 54	83 55	89 56
26	0 13 41	10 102	8 33	18 45	24 46	30 47	36 48	42 49	48 50	54 51	60 52	66 53	72 54	78 55	84 56	90 57
27	0 13 111	11 102	9 93	19 45	25 46	31 47	37 48	43 49	49 50	55 51	61 52	67 53	73 54	79 55	85 56	91 57
28	0 14 51	12 102	11 44	20 46	26 47	32 48	38 49	44 50	50 51	56 52	62 53	68 54	74 55	80 56	86 57	92 58
29	0 14 111	13 112	13 11	21 46	27 47	33 48	39 49	45 50	51 51	57 52	63 53	69 54	75 55	81 56	87 57	93 58
30	0 15 51	14 112	14 53	22 46	28 47	34 48	40 49	46 50	52 51	58 52	64 53	70 54	76 55	82 56	88 57	94 58
31	1 0 02	0 03	0 04	0 05	0 06	0 07	0 08	0 09	0 10	0 11	0 12	0 13	0 14	0 15	0 16	0 17

Agriculture.

As crops depend on the existence of plant food and moisture in the soil so the character of the agriculture of a country depends largely on its soil and climate. It is true that geographical situation, the character of the people and other considerations have their influence which is not inconsiderable, but the limitations imposed by the nature of the soil and above all by the climate tend to the production of a certain class of agriculture under a certain given set of conditions.

The climate of India, while varying to some extent in degree, in most respects is remarkably similar in character throughout the country. The main factors in common are the monsoon, the dry winter and early summer months, and the intense heat from March till October. These have the effect of dividing the year into two agricultural seasons, the *Kharif* or Monsoon and the *Rabi* or Winter Season each bearing its own distinctive crops. From early June till October abundant rains fall over the greater part of the continent while the winter months are generally dry although North-Western India benefits from showers in December and January. The distribution of the rainfall throughout the year, which is of considerable importance to agriculture, is none too favourable, but is not quite so bad as is often represented. The rainfall is greatest at what would otherwise be the hottest time of the year, *viz.*, mid-summer and when it is most needed. It should be remembered that in a hot country intermittent showers are practically valueless as evaporation is very rapid. The distribution of rainfall such as is common in England, for example, would be of little use to Indian soils.

Soil.—For the purpose of soil classification India may be conveniently divided into two main areas in (1) The Indo-Gangetic plains, (2) Central and Southern India. The physical features of these two divisions are essentially different. The Indo-Gangetic plains (including the Punjab, Sind, the United Provinces, Bengal, Bihar and Assam) form large level stretches of alluvium of great depth. The top soil varies in texture from sand to clay, the greater part being a light loam, porous in texture, easily worked, and naturally fertile. The great depth of the alluvium tends to keep down the soil temperature. Central and Southern India on the other hand consist of hills and valleys. The higher uplands are too hot and too near the rock to be suitable for agriculture which is mainly practised in the valleys where the soil is deeper and cooler and moisture more plentiful. The main difference between the soils of the two tracts is in texture and while the greater part of the land in Northern India is porous and easily cultivated, and moist near to the surface large stretches in Southern and Central India consist of an intractable soil called the Deccan trap, sticky in the rains, hard and crumbly in the dry weather and holding its moisture at lower levels.

Agricultural Capital and Equipment.—India is a country of small holdings and the vast majority of the people cultivate patches varying in size from one to eight acres. Large holdings are practically unknown, and are mainly

confined to European planters. Farming is carried on with a minimum of capital, there being practically no outlay on fencing, buildings, or implements. The accumulation of capital is prohibited by the occurrence of famine and the high rate of interest and extravagance of expenditure in marriage celebrations. The organization of co-operative credit which has been taken in hand by Government and which has already proved successful in many provinces will undoubtedly lead to an increase in Agricultural capital.

Equipment.—For power the ryat depends chiefly on cattle which, as a rule, are light and active but possess little hauling power. The necessary tilth for crops is brought about by frequency of ploughings, the result being that the soil is seldom tilled as it should be. This is not due in any way to want of knowledge on the part of the people but through want of proper equipment. The Indian Agriculturist, as a rule, possesses an intimate knowledge of the essentials of his own business, and fails through lack of ways and means.

Implements are made of wood although ploughs are usually tipped with iron points and there is a great similarity in their shape and general design. The levelling beam is used throughout the greater part of the country in preference to the harrow and roller; and throughout Northern India the plough and the levelling beam are the only implements possessed by the ordinary cultivator.

In the heavier soils of the Deccan trap a cultivating implement consisting of a single blade, resembling in shape a Dutch hoe, is much used. Seed drills and drill hoes are in use in parts of Bombay and Madras but throughout the greater part of the country the seed is either broadcasted or ploughed in. Hand implements consist of various sizes of hoes, the best known of which are the *kodal* or spade with a blade set at an angle towards the labourer who does not use his feet in digging, and the *khurpi* or small hand hoe. Of harvesting machinery there is none, grain is separated either by treading out with oxen or beating out by hand, and winnowing by the agency of the wind.

Cultivation.—Cultivation at its best is distinctly good but in the greater part of the country it has plenty of room for improvement. As in any other country success in agriculture varies greatly with the character of the people, depending largely as it does on thrift and industry. In most places considering the large population cultivation is none too good. Agriculture suffers through lack of organization and equipment. Owing to the necessity of protection against thieves, in most parts the people live in villages, many of them at considerable distances from their land. Again, holdings, small though they are, have been sub-divided without any regard for convenience. Preparatory tillage generally consists of repeated ploughings, followed as seed time approaches by harrowings with the levelling beam. The *Rabi* crops generally receive a more thorough cultivation than the *Kharif*, a finer seed bed being necessary owing to the dryness of the growing season. Manure is

AGRICULTURAL PRODUCE.

The following table shows the area under the principal crops, in British India, and their territorial distribution, for 1917-18. The cropped area is always greater than the area of cultivated land, owing to double cropping. The figures represent acres :—

Province.	Rice.	Wheat.	Barley.	Other Food Grains and Pulses.	Total Food Grains and Pulses.	Oilseeds.	Sugar.	Cotton.	Jute.	Total cropped Area.	Net cropped Area after deducting Area cropped more than once.
Bengal ..	20,961,800	124,000	97,100	1,500,600	22,683,500	1,558,300	274,400	51,900	2,376,200	28,941,300	24,451,700
Bihar and Orissa ..	15,646,800	1,199,400	1,337,900	9,241,200	27,424,800	2,168,000	264,900	69,600	223,600	31,976,900	25,803,400
Assam ..	4,802,794	..	..	171,204	4,973,998	294,131	34,509	34,091	100,524	6,444,360	5,876,624
United Provinces ..	7,417,248	7,312,296	5,144,061	20,373,150	40,246,755	730,176	1,484,249	1,304,566	..	46,722,388	36,412,245
Punjab ..	1,004,691	9,925,795	1,475,341	12,338,117	24,743,944	1,425,380	502,836	1,642,555	..	32,867,951	27,192,809
N. W. Frontier Province.	37,353	1,143,421	267,149	1,133,355	2,581,278	140,500	31,333	38,233	..	2,957,847	2,530,541
Burma.. ..	10,803,683	44,999	3	1,020,133	11,868,818	1,346,188	42,665	248,990	..	15,421,413	14,825,846
Central Provinces and Berar.	5,170,881	3,884,355	21,877	10,231,010	19,308,123	2,088,459	26,542	4,501,319	..	26,757,177	24,234,876
Madras ..	11,655,302	15,022	3,072	17,973,042	29,646,438	2,932,169	219,050	2,700,487	..	38,821,332	34,056,060
Bombay and Sind ..	3,081,399	2,701,856	58,212	17,420,985	23,262,452	1,393,734	99,446	4,743,144	..	32,974,903	31,768,143
Minor Areas ..	86,168	76,760	10,571	432,981	696,480	31,340	12,686	68,203	..	931,255	725,527
Total ..	80,667,619	26,427,904	8,505,286	91,385,777	207,436,586	14,108,377	2,992,616	15,403,088	2,700,324	264,816,826	227,847,771

generally applied to *Kharif* crops. Seeding is either done broadcast or by drilling behind a wooden plough or drill. Thinning and spacing are not nearly so well done as they might be, and intercultivation is generally too superficial. Harvesting is done by sickle where the crops are cut whole, and there is little waste involved. On the whole the methods of the ryats if carried out thoroughly would be quite satisfactory, but it is doubtful if this could be done with the number of cattle at his disposal.

Irrigation is necessary over the greater part of the country owing to insufficient rainfall and the vagaries of the monsoon. Canal irrigation has been greatly extended over the Punjab, Sind, United Provinces and Madras through Government canals which, in addition to securing the crops over existing cultivated land have converted large desert tracts into fertile areas. The Punjab and parts of the United Provinces are naturally well suited to canal irrigation owing to the frequency of their rivers. The water is generally taken off at a point a little distance from where the rivers leave the hills and is conducted to the arid plains below. The main canal splits up into diverging branches, which again subdivide up into distributaries from which the village channels receive their supplies. Water rates are levied on the matured areas of crops, Government thus bearing a part of the loss in case of failure. Much of the land is supplied by what is termed flow irrigation, *i.e.*, the land is directly commanded by the canal water, but a great deal has to be lifted from one to three feet the canal running in such cases below the level of the land. Rates for lift irrigation are, of course, lower than those for flow.

Irrigation canals are generally classed into (1) perennial and (2) inundation canals. Perennial canals, which give supplies in all seasons generally have their headworks near the hills, thus commanding a great range of country. Farther from the hills, owing to the very gradual slope of the land and the lowness of the rivers in the cold weather, perennial irrigation is difficult and inundation canals are resorted to. These canals only give irrigation when the rivers are high. As a rule, in Northern India they begin to flow when the rivers rise owing to the melting of the snow on the hills in May and dry up in September.

Irrigation from Wells.—About one-quarter of the total irrigation of the country is got from lifting water from wells ranging in depth from a few feet to over fifty feet. Their numbers have greatly increased in recent years largely through Government advances for their construction. The recurring cost of this form of irrigation has, however, greatly increased owing to the high price of draught cattle and the increasing cost of their maintenance.

Tank irrigation is common in Central and Southern India. Large quantities of rain water are stored in lakes (or tanks) and distributed during the drier seasons of the year. The system of distribution is the same as that by canal.

Manures.—Feeding of animals for slaughter being practically unknown in India, the amount of farm yard manure generally available in other countries from this source

thus does not exist. This is partially if not entirely made up for by the large numbers required for tillage and the amount of cows and buffaloes kept for milk. Unfortunately fuel is very scarce and a greater part of the dung of animals has to be used for burning. Most of the trash from crops is used up for the same purpose and the net return of organic matter to the soil is thus insignificant. In some parts cakes of oil seed are used as manures for valuable crops like tea and sugarcane but in the greater part of the country the only manure applied is the balance of farm yard manure available after fuel supplies have been satisfied. Farm yard manure is particularly effective and its value is thoroughly appreciated but the people have much to learn in the way of storage of bulky manures and the conservation of urine.

Rice.—A reference to the crop statistics shows that rice is the most extensively grown crop in India, although it preponderates in the wetter parts of the country, *viz.*, in Bengal, Bihar and Burma and Madras. The crop requires for its proper maturing a moist climate with well assured rainfall. The cultivated varieties are numerous, differing greatly in quality and in suitability for various conditions of soil and climate, and the people possess an intimate acquaintance with those grown in their own localities. The better qualities are sown in seed beds and transplanted in the monsoon. Broadcasted rice is grown generally in lowlying areas and is sown before the monsoon as it must make a good start before the floods arrive. Deep water rices grow quickly and to a great height and are generally able to keep pace with the rise in water level.

For transplanted rice the soil is generally prepared after the arrival of the monsoon and is worked in a puddle before the seedlings are transplanted. The land is laid out into small areas with raised partitions to regulate the distribution of the water supply. The seedlings are planted in small bunches containing from 4 to 6 plants each and are simply dibbled into the mud at distances of 6 to 12 inches apart. Where available, irrigation water is given at frequent intervals and the fields are kept more or less under water until the crop begins to show signs of ripening.

Wheat.—Wheat is grown widely throughout Northern India as a winter crop, the United Provinces and the Punjab supplying about two-thirds of the total area, and probably three quarters of the total outturn in India. The majority of the varieties grown belong to the Species *Triticum Vulgare*. Indian wheats are generally white, red and amber coloured and are mostly classed as soft from a commercial point of view. The grains are generally plump and well filled but the samples are spoiled through mixtures of various qualities. Indian wheat is generally adulterated to some extent with barley and largely with dirt from the threshing floor and although there is a good demand in England and the Continent for the surplus produce, prices compare unfavourably with those obtained for Canadian and Australian produce. The crop is generally grown after a summer fallow and, except in irrigated tracts, depends largely on the conservation of the soil moisture from the previous monsoon.

AGRICULTURAL STATISTICS.

	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Net Area by professional survey..	618,605,938	618,927,145	619,594,406	619,392,157	619,520,804	619,158,644	620,334,850
Area under forest ..	80,861,368	82,400,281	82,622,475	82,934,743	85,079,169	85,070,524	86,924,922
Not available for cultivation ..	149,605,179	146,386,582	147,160,102	145,427,217	143,930,260	143,441,598	142,782,768
Cultivable waste other than fallow	114,813,449	115,024,887	115,586,851	115,079,507	113,819,949	112,485,364	111,485,761
Fallow land	54,869,245	48,760,388	52,620,492	45,897,431	51,731,002	45,493,149	48,465,917
Net area sown with crops	215,981,683	224,165,602	219,191,773	227,611,132	221,778,167	229,620,075	227,847,771
Area irrigated ..	40,679,142	45,539,074	46,836,019	47,133,925	46,897,715	48,003,917	45,866,845
Area under Food-grains—							
Rice ..	76,636,887	78,752,493	76,907,895	77,688,882	78,079,425	80,983,124	80,667,619
Wheat ..	25,025,236	23,861,185	22,685,024	25,451,330	23,871,366	25,043,686	26,427,904
Barley ..	8,432,503	7,420,335	7,206,144	7,904,783	8,012,987	7,971,897	8,505,286
Jawar ..	18,386,332	20,967,730	21,405,397	21,223,398	23,050,921	21,891,980	21,117,771
Bajra ..	13,032,938	16,268,801	15,385,537	16,041,561	14,343,377	15,227,957	12,699,297
Ragi ..	4,296,207	4,455,537	4,370,376	4,250,788	4,338,380	4,072,166	4,265,211
Maize ..	5,591,349	6,316,089	6,166,939	6,187,729	6,735,325	6,544,212	6,485,508
Gram ..	14,128,881	12,422,848	9,296,672	14,364,490	13,558,533	15,699,021	16,724,034
Other grains and pulse ..	29,507,101	30,907,560	28,149,109	31,411,589	31,144,723	31,334,065	30,543,996
Total Food-grains	195,097,434	201,372,578	191,573,393	204,504,550	203,735,037	208,773,108	207,436,586
Area under other food-crops (including gardens, orchards, &c.).	7,582,432	8,188,499	8,124,809	8,200,367	8,307,725	8,410,432	8,330,477
Area under—							
Sugar ..	2,565,770	2,712,085	2,707,373	2,458,865	2,550,608	2,614,788	2,992,616
Coffee ..	94,576	91,913	85,723	86,712	91,003	30,602	95,311
Tea ..	543,565	557,856	572,106	584,379	593,364	603,510	618,922

Rains in January and February are generally beneficial but an excess of rainfall in these months usually produces rust with a diminution of the yield. On irrigated land 2 to 4 waterings are generally given. The crop is generally harvested in March and April and the threshing and winnowing go on up till the end of May. In good years the surplus crop is bought up at once by exporters and no time is lost in putting it on the European market as other supplies are at that time of year scarce. In years of famines the local price is generally sufficiently high to restrict exports.

The Millets.—These constitute one of the most important group of crops in the country, supplying food for the poorer classes and fodder for the cattle. The varieties vary greatly in quality, height and suitability to various climatic and soil conditions. Perhaps the two best known varieties are Jowar (*Sorghum vulgare*) tall growing with a large open head, and Bajra with a close rat-tail head and thin stem. Generally speaking the jowars require better land than the bajras and the distribution of the two crops follows the quality of the soil. Neither for jowar nor bajra is manure applied and cultivation is not so thorough as for wheat, the main objective being to produce a fine seed bed. As the crop is generally sown in the beginning of the monsoon it requires to be thoroughly weeded. It is often grown mixed with the summer pulses and other crops in which case thin seedlings are resorted to. The subsidiary crops are harvested as they ripen either before the millet is harvested or afterwards. The produce is consumed in the country.

Pulses are commonly grown throughout India and the grain forms one of the chief foods of the people. Most kinds do well but are subject to failure or shortage of yield owing to a variety of circumstances among which rain at the time of flowering appears to be one of the most important. They are therefore more suitable to grow as mixed crops especially with cereals, and are generally grown as such. Being deep rooted and practically independent of a Nitrogen supply in the soil they withstand drought and form a good alternation in a cereal rotation. The chief crops under this heading are gram, mash, mung and moth, gram forming the main winter pulse crop while the others are grown in the summer. The pulses grow best on land which has had a good deep cultivation. A fine seed bed is not necessary. For gram especially the soil should be loose and well aerated. Indian pulses are not largely exported although they are used to some extent in Europe as food for dairy cows.

Cotton is one of the chief exports from India and the crop is widely grown in the drier parts of the country. The lint from Indian cotton is generally speaking short and coarse in fibre and unsuited for English mills. Japan and the Continent are the chief buyers. The crop is grown during the summer months and requires a deep moist soil and light rainfall for its proper growth. Rain immediately after sowing or during the flowering period is injurious. In parts of Central and Southern India the seed is sown in lines and the crop receives careful attention but over

Northern India it is sown broadcast (often mixed with other crops) and from the date of sowing till the time of picking is practically left to itself. The average yield, which does not amount to more than 400 lbs. per acre of seed cotton, could doubtless be greatly increased by better cultivation.

Sugarcane.—Although India is not naturally suited for sugarcane growing, some 3½ millions of acres are annually sown. The crop is mostly grown in the submontane tracts of Northern India. The common varieties are thin and hard, yielding a low percentage of juice of fair quality. In India white sugar is not made by the grower who simply boils down the juice and does not remove the molasses. The product called gur or gul is generally sold and consumed as such, although in some parts a certain amount of sugar-making is carried on. The profits, however, are small owing to the cheapness of imported sugar and there appears to be some danger to the crop if the present taste for gur were to die out. The question has been taken up by Government and a cane-breeding station has been recently opened near Coimbatore in Madras with the object of raising seedling canes and otherwise improving the supply of cane sets. A number of sugar factories of a modern type have been set up within recent years in Bihar and the United Provinces. The chief difficulty seems to be the obtaining of a sufficiently large supply of canes to offset the heavy capital charges of the undertakings.

Oilseeds.—The crops classified under this heading are chiefly sesamum, linseed and the cruciferous oilseeds (rape, mustard, etc.). Although oilseeds are subject to great fluctuation in price and the crops themselves are more or less precarious by nature—they cover an immense area.

Linseed requires a deep and moist soil and is thus grown chiefly in Bengal, Bihar, the United Provinces and the Central Provinces. The crop is grown for seed and not for fibre and the common varieties are of a much shorter habit of growth than those of Europe. The yield varies greatly from practically nothing up to 500 or 600 lbs. of seed per acre. The seed is mainly exported whole but a certain amount of oil pressing is done in the country.

Sesamum (or Gingelly) is grown mostly in Peninsular India as an autumn or winter crop. The seed is mostly exported.

The Cruciferous Oilseeds form an important group of crops in Northern India where they grow freely and attain a fair state of development. They are one of the most useful crops in the rotation. They occupy the land for a few months only, and owing to their dense growth leave the soil clean and in good condition after their removal. A number of varieties are grown differing from each other in habit of growth, time of ripening, and size and quality of seed. The best known are rape, toria, and sarson. The crop is generally sown in September or early October and harvested from December to February. The crop is subject to the attack of aphid (green fly) at the time of flowering and sometimes suffers considerable damage from this pest. The seed

AGRICULTURAL STATISTICS OF BRITISH INDIA.

	1911-12.	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Area under Oilseeds—							
Linseed	3,763,222	3,125,067	2,268,801	2,525,432	2,451,049	2,558,074	20,781,280
Sesamum (til).. ..	4,174,341	4,164,045	4,278,855	4,478,124	4,135,086	4,014,078	3,374,432
Rape and Mustard	4,223,598	3,555,300	4,083,135	4,144,374	4,075,575	4,010,944	4,358,909
Other Oilseeds.. ..	4,333,704	4,091,368	4,027,236	4,185,657	3,573,879	4,052,492	3,593,756
Total Oilseeds.. ..	16,494,865	14,935,780	14,658,027	15,333,591	14,235,589	14,635,588	14,108,377
Area under —							
Cotton	14,568,189	14,138,497	15,844,363	15,221,787	11,435,135	13,836,607	15,403,088
Jute	3,090,827	3,323,951	3,135,585	3,308,718	2,349,381	2,671,302	2,700,324
Other fibres	688,368	805,911	915,303	976,142	787,351	830,540	887,676
Indigo	274,476	227,046	169,221	145,792	351,265	764,823	700,767
Opium	220,164	197,314	170,503	178,582	182,030	216,899	221,200
Tobacco	998,943	964,726	1,001,710	1,056,349	1,027,038	1,041,303	1,014,862
Fodder crops	4,977,324	5,770,466	5,910,087	6,362,511	7,076,258	8,173,058	8,193,925
Estimated yield* of—							
Rice (Cleaned)	601,480,000	569,700,000	575,800,000	544,840,000	656,480,000	695,820,000	719,040,000
Wheat	9,924,500	9,853,000	8,358,000	10,087,000	3,552,000	10,234,000	10,162,000
Coffee	+	+	+	+	+	+	+
Tea †	268,602,700	297,878,100	307,249,600	312,976,200	371,336,700	368,429,000	372,156,000
Cotton	3,288,000	4,610,000	5,066,000	5,209,000	3,738,000	4,489,000	4,035,000
Jute	8,234,700	9,342,800	8,893,900	10,443,900	7,340,900	8,306,000	8,804,600
Linseed	644,900	542,100	386,200	397,000	476,000	526,000	507,000
Rape and Mustard	1,325,500	1,241,200	1,087,500	1,219,200	1,102,100	1,191,000	1,116,200
Sesamum (til).. ..	397,600	474,000	403,500	551,000	482,000	513,000	386,200
Groundnut	605,700	669,900	748,800	947,700	1,058,000	1,196,000	1,042,000
Indigo	47,700	39,100	26,800	25,200	55,100	96,000	87,800
Cane-sugar	2,451,100	2,583,600	2,291,500	2,462,000	2,634,000	2,730,000	3,266,000

* The acreage of crops given in this table is for British India only, but the estimated yield includes the crops in certain of the Native States.

† The statistics of the production of tea are for calendar years.

‡ Return of production discontinued.

is very subject to injury from rain and great care has to be taken in the drying. The produce is largely exported whole, but there is a considerable amount of local oil-pressing—the cake being in demand for feeding purposes.

Jute.—Two varieties of the plant are cultivated as a crop, *Capsularis* and *Olitorius*. Jute growing is confined almost entirely to Eastern Bengal, in the Ganges-Brahmaputra Delta. The crop requires a rich moist soil. Owing to river inundation this part of India receives a considerable alluvial deposit every year and the land is thus able to sustain this exhausting crop without manure. The crop is rather delicate when young, but once established requires no attention, and grows to a great height (10 to 11 feet). Before ripening the crop is cut and rotted in water. After about three weeks submersion the fibre is removed by washing and beating. At the present high range of prices jute may be considered to be the best paying crop in India.

Tobacco is grown here and there all over the country chiefly, however, in Bengal, Bihar, Bombay, Madras and Burma. Of two varieties cultivated *Nicotiana Tabacum* is by far the most common. Maximum crops are obtained on deep and moist alluvium soils and a high standard of cultivation including liberal manuring is necessary. The crop is only suited to small holdings where labour is plentiful as the attention necessary for its proper cultivation is very great. The seed is germinated in seed beds and the young plants are transplanted when a few inches high, great care being taken to shield them from the sun. The crop is very carefully weeded and hoed. It is topped after attaining a height of, say, 2 ft., and all suckers are removed. The crop ripens from February onwards and is cut just before the leaves are become brittle. By varying the degree of fermentation of the leaves different qualities of tobacco are obtained. A black tobacco is

required for *Hooka* smoking and this is the most common product but a certain amount of yellow leaf is grown for cigar making.

Live-stock consist mainly of cattle, buffaloes and goats, horses not being used for agricultural purposes. Sheep are of secondary importance.

For draught purposes cattle are in more general use than buffaloes especially in the drier parts of the country, but buffaloes are very largely used in the low lying rice tracts. For dairying buffaloes are perhaps more profitable than cows as they give richer milk and more of it: but they require more feeding. The poorer people depend largely on the milk of goats of which there are an enormous number throughout India. Cattle breeding is carried on mainly in the non-cultivated tracts in Central and Southern India, Southern Punjab and Rajputana, where distinct breeds with definite characters have been preserved. The best known draught breeds are Hansi, Nellore, Amritmehal, Gujrat, Malvi, and the finest milk cows are the Sahiwal (Punjab) Gir (Kathiawar) and Sind. Owing, however, to the encroachment of cultivation on the grazing areas well-bred cattle are becoming scarce, and some of the breeds are threatened with extinction. Efforts to improve the quality of the cattle in the non-breeding districts by the use of selected bulls have hitherto been frustrated by the promiscuous breeding which goes on in the villages.

Dairying.—Though little noticed, dairying forms a very large indigenous industry throughout India. The best known products are native butter (ghee) and cheese (dahi). During recent years a considerable trade in tinned butter has sprung up in Gujrat (Bombay Presidency). While pure ghee and milk can be procured in the villages, in the towns dairy products can scarcely be bought unadulterated.

AGRICULTURAL PROGRESS.

The Agricultural Departments in India as they now exist may be said to be a creation of the last ten years. There have for a good many years past been experimental farms, under official control, in various parts of India, but they were in the past to a large extent in the hands of amateurs, and the work of the Agricultural Departments, with which all the major provinces were provided by about 1884, was in the main confined to the simplification of revenue settlement procedure and the improvement of the land records system. In 1901 the appointment of an Inspector-General of Agriculture gave the Imperial Agricultural Department for the first time an expert head, and placed the Government of India in a position to enlarge the scope of their own operations and to co-ordinate the work being done on independent lines in various provinces. At that time the staff attached to the Government of India consisted of an Agricultural Chemist and a Cryptogamic Botanist, while trained Deputy Directors of Agriculture were employed only in Madras, Bombay and the United Province and the Economic Botanist in Madras was the only provincial representative of the more specialised type of appointments. Within the next few years a number of new appointments

were made, so that by March 1905 there were altogether 20 sanctioned agricultural posts; of these seven were Imperial, including a number of specialist appointments attached to the Agricultural Research Institute and College, the establishment of which at Pusa in Bengal was sanctioned in 1903. A great impetus was given to the development of the Agricultural Departments by the decision of the Government of India in 1905 to set apart a sum of 20 lakhs (£133,000) a year for the development of agricultural experiment, research, demonstration and instruction. Their ultimate aim, as then expressed, was the establishment of an experimental farm in each large tract of country in which the agricultural conditions are approximately homogeneous, to be supplemented by numerous small demonstration farms; the creation of an agricultural college teaching up to a three years' course in each of the larger provinces; and the provision of an expert staff in connection with these colleges for purposes of research as well as education. The eventual cost, it was recognised, would largely exceed 20 lakhs a year. The Pusa Research Institute and College alone has cost nearly £150,000 including equipment. A part of the cost was met from a sum of £30,000 placed at Lord Curzon's dis-

AREA, CULTIVATED and UNCULTIVATED, in 1917-18 : IN ACRES.

Administrations.	Area according to Survey.	Deduct Indian States.	NET AREA.	
			According to Survey.	According to Village Papers
Bengal	53,931,504	3,476,638	50,454,866	50,454,866
Madras	97,852,401	6,802,773	91,049,628	89,699,386
Bombay { Presi-	85,706,955	37,006,400	48,700,555	48,700,555
dency.				
Sind ..	33,967,272	3,872,000	30,095,272	30,095,272
United { Agra ..	57,342,219	4,345,232	52,996,987	52,743,968
Pro-				
vinces { Oudh ..	15,306,720	....	15,306,720	15,474,259
Bihar and Orissa ..	71,124,553	18,334,720	52,789,833	52,789,833
Punjab	86,367,319	24,511,384	61,855,935	60,333,971
Burma.. { Upper ..	58,366,106	3,375,130	54,990,976	54,990,976
Lower ..	55,201,827	....	55,201,827	55,201,827
Central Provinces ..	72,552,216	19,960,343	52,591,873	52,588,273
Berar	11,374,637	....	11,374,637	11,374,637
Assam	39,275,494	7,969,920	31,305,574	31,305,574
North-West Fron-	8,578,571	140,800	8,437,771	8,571,356
tier Province.				
Ajmer-Merwara ..	1,770,921	....	1,770,921	1,770,921
Delhi	367,869	....	367,869	367,869
Coorg	1,012,260	....	1,012,260	1,012,260
Manpur Pargana* ..	31,346	....	31,346	31,346
Total	750,130,190	129,795,340	620,334,850	617,507,149

Administrations.	CULTIVATED.		UNCULTIVATED.		Forests.
	Net Area actually Cropped.	Current Fallows.	Culturable Waste other than Fallow.	Not available for Cultivation.	
Bengal	24,451,700	5,209,319	5,248,994	11,269,551	4,275,302
Madras	34,056,060	9,075,201	11,593,272	21,983,195	12,991,658
Bombay { Presi-	27,300,259	6,028,074	1,048,369	5,749,182	8,574,671
dency.					
Sind ..	4,467,884	5,019,363	5,849,535	13,950,041	808,449
United { Agra ..	27,035,984	2,008,526	7,196,933	7,748,649	8,703,876
Pro-					
vinces { Oudh ..	9,326,261	511,177	2,801,489	2,222,491	612,841
Bihar and Orissa ..	25,803,400	5,015,571	6,284,128	8,176,091	7,510,643
Punjab	27,162,809	2,575,444	16,026,513	12,572,663	1,996,542
Burma { Upper ..	5,337,324	4,181,722	10,720,960	21,592,929	13,158,041
Lower ..	9,488,522	745,620	14,386,742	23,194,364	7,386,579
Central Provinces ..	17,411,249	3,276,830	13,330,862	3,982,064	14,587,268
Berar	6,823,627	1,322,866	135,676	959,620	2,132,848
Assam	5,876,624	2,584,546	13,996,408	5,510,500	3,337,496
North-West Fron-	2,530,541	452,964	2,597,805	2,623,362	366,684
tier Province.					
Ajmer-Merwara ..	365,393	270,641	195,996	842,109	96,782
Delhi	210,758	20,219	53,598	71,097	12,197
Coorg	142,623	167,379	10,893	333,979	357,386
Manpur Pargana* ..	6,753	455	7,588	881	15,669
Total	227,847,771	48,465,917	111,485,761	142,782,768	86,924,932

* A British District in Central India.

posals by Mr. Phipps, an American visitor to India. This example of munificence has recently been followed by Sir Sassoon J. David, who placed the sum of £53,300 at the disposal of the Government of Bombay for the establishment of vernacular agricultural schools and the improvement of agricultural methods, in commemoration of the visit of Their Imperial Majesties to India.

Record of Progress.

At the beginning of 1912 there were over 40 posts in the Indian Agricultural Service, besides that of Inspector-General, which was abolished at the end of the year 1911-12, the rapid advance of the provincial departments having rendered its continuance unnecessary. The officers serving directly under the Government of India included the Director of the Pusa Institute, who was also Principal of the Agricultural College, a cotton specialist, two mycologists, three entomologists, two agricultural chemists, and an economic botanist. Some of these were supernumerary officers undergoing training. The provincial agricultural departments vary in strength. Generally speaking, each of the larger provinces has at least a Deputy-Director of Agriculture (most provinces have two), an Agricultural Chemist, and an Economic Botanist. In several provinces the principalship of the Agricultural College is a separate appointment and among the remaining officers are a fibre expert in Eastern Bengal and Assam, and a "scientific officer for planting industries in Southern India" in Madras. The Government of Madras have also a mycologist and an entomologist of their own. The posts so far referred to have hitherto necessarily been filled almost exclusively by the appointment of trained specialists from the United Kingdom. There are also in the various provinces a considerable number of locally appointed Assistant Professors (in the Agricultural Colleges), Assistant Agriculturists and Entomologists, Agricultural Inspectors, Superintendents of Farms, etc., and subordinate officers. It is an essential part of the scheme adopted that facilities for the best agricultural training shall be made available in India, in order that the country may become self-supporting, so far as possible, in regard to the scientific development of agricultural methods on lines suited to local conditions. Provincial agricultural colleges, which are also research stations, have within the last few years been established in Madras, Bombay, Bengal, the United Provinces, the Punjab and the Central Provinces. The Central College at Pusa is intended to provide for more advanced training, and gives also short practical courses in subjects not at present taught in the provincial colleges. The Provincial Directors of Agriculture have so far been selected from the ranks of the Indian Civil Service, and they still in some provinces have other functions besides the supervision of the Agricultural Department: but in all the larger provinces except the United Provinces the appointment of Director of Agriculture has since 1905 been separated from that of Director of Land Records.

Machinery.

The rapid extension in India in recent years of the use of machinery in connection with agriculture and irrigation has created a de-

mand for expert assistance to meet which Agricultural Engineers have since the end of the period under review been appointed in Bombay and the United Provinces to advise cultivators as to engines, pumps, threshing machinery, etc. An important advance in the direction of bringing the provincial agricultural departments more closely into touch with one another was made in 1905 by the creation of the Board of Agriculture. The Board, which includes the Imperial and provincial experts, meets annually to discuss the programme of agricultural work, and agricultural questions generally, and makes recommendations which are submitted to the Government of India for consideration.

Work of the Departments.

The work of the Agricultural Department has two main aspects. On the one hand, by experiment and research, improved methods or crops are developed, or the means of combating a pest are worked out; on the other hand, ascertained improvements must be demonstrated and introduced as far as possible into the practice of the Indian cultivator. There is an essential difference, between agricultural departments in the East and in the West in that, whereas the latter have arisen to meet the spontaneous demands of the cultivators of the soil, the former are entirely the creation of a government anxious to give all the assistance it can to its agricultural subjects. The demand for improved agriculture has not in India, except in special cases, come from the cultivator, and it is necessary for the Department to put forth every effort, first to ascertain the needs of the cultivators and then to demonstrate how they can most effectively be met. It is only a few years since work on modern lines was commenced by the reorganised agricultural departments, and, in the first place, a great deal of spade work had to be performed.

Cotton.

Cotton from the first received much of the attention of the new departments. Very striking results have already been achieved, and more particularly with Cambodia and other exotic varieties. The second line of improvement is the separation and selection of indigenous varieties. In Madras the efforts of the Agricultural Department have resulted in the spread of the local improved variety called *Karungany* in the Tinnevely District and white-seeded Tellapathi cotton in Kurnool both of these varieties having been selected from among the mixtures ordinarily grown in the districts. A system of seed distribution was gradually built up, and now, after five or six years' work, there is a vast area under *Karungany*. The Department supplies pure seed to contract seed growers and buys the seed-cotton from these men, gins it, and arranges the distribution of seed through village depots. In Bombay, two have been selected as the best out of many hybrids and pure line cottons bred and tried for many years on the Surat farm. They give a distinct advantage both in quantity and quality over the ordinary local cotton, and promise to sell at rates 5 per cent. higher. In another part of the province arrangements are being made to distribute on a large scale seed of another improved form, which can be grown, it is estimated, over 1,300,000 acres. In the Southern Maratha Country, Broach

AREA, UNDER IRRIGATION IN 1917-18 : IN ACRES.

Administrations.		Total Area Cropped.	AREA IRRIGATED.				
			By Canals.		By Tanks.	By Wells.	Other Sources.
			Government.	Private.			
Bengal	.. ..	28,941,300	126,794	175,832	776,194	14,535	1,325,013
Madras	.. ..	38,821,332	3,514,616	324,773	3,653,784	1,507,291	523,489
Bombay	{ Presidency.	28,139,720	148,434	92,931	125,018	570,755	35,501
	{ Sind ..	4,835,183	3,010,117	17,427	..	35,404	194,508
United Pro- vinces.	{ Agra ..	34,216,836	2,525,030	25,635	67,291	3,698,716	1,827,321
	{ Oudh ..	12,505,552	..	..	..	1,420,117	1,319,452
Bihar and Orissa	.. ..	31,976,900	858,091	591,873	1,394,356	616,740	967,675
Punjab	.. ..	32,867,951	7,682,235	513,007	12,723	2,950,996	155,188
Burma	{ Upper ..	5,880,615	485,388	216,017	187,470	14,101	125,185
	{ Lower ..	9,540,798	251	29,474	3,735	2,969	164,323
Central Provinces	.. ..	19,897,602	69,536	2,149	305,236	96,869	22,965
Berar	.. ..	6,859,575	30	..	310	29,990	314
Assam	.. ..	6,444,360	120	157,648	..	..	37,615
North-West Frontier Province.	Pro- vince.	2,957,847	341,829	454,627	..	96,782	81,374
Ajmer-Merwara	.. ..	459,599	..	....	35,554	72,094	158
Delhi	.. ..	319,888	17,800	....	596	11,261	..
Coorg	.. ..	144,444	2,541	....	1,532	..	..
Manpur Pargana	.. ..	7,324	..	....	..	140	..
Total		264,816,826	18,782,812	2,601,393	6,563,799	11,138,760	6,780,081

AREA IRRIGATED.

CROPS IRRIGATED *

Administrations.	Total Area Irrigated.	CROPS IRRIGATED *				Total Area of Crops Irrigated.
		Wheat.	Other Cereals and Pulses.	Miscellaneous Food Crops.	Non-food Crops.	
Bengal	2,418,368	25,779	1,698,699	650,081	381,473	2,756,032
Madras	9,523,953	3,318	10,439,160	481,931	826,787	11,751,196
Bombay { Presidency	972,639	200,436	512,571	227,569	157,103	1,097,679
	.. { Sind ..	3,257,456	485,040	2,353,302	55,313	568,400
United Pro- vinces.	{ Agra ..	8,143,993	2,577,174	4,414,034	164,500	1,649,750
	{ Oudh ..	2,739,569	1,167,974	1,255,916	48,048	320,206
Bihar and Orissa ..	4,428,735	253,206	3,717,112	547,381	151,684	4,669,383
Punjab	11,314,149	4,658,381	2,602,801	549,412	3,738,122	11,548,716
Burma { Upper	1,028,161	..	4,639	1,043,506	738	1,048,883
	{ Lower ..	200,752	..	177	197,347	3,579
Central Provinces ..	496,755	56,355	379,784	58,860	1,756	496,755
Berar	30,644	6,764	1,411	20,990	1,479	30,644
Assam	195,383	20	4,695	189,900	768	195,383
North-West Frontier Province.	974,612	331,714	462,148	52,050	133,185	979,097
Ajmer-Merwara ..	107,806	17,636	43,042	38,161	11,448	110,287
Delhi	29,657	8,620	2,640	11,882	6,610	29,752
Coorg	4,072	4,072	..	..	..	4,073
Manpur Pargana ..	140	49	91	..	..	140
Total ..	45,866,845	9,796,539	27,892,222	4,336,931	7,953,088	50,014,680

* Includes the area irrigated at both harvests.

† Includes 35,900 acres for which details are not available.

cotton, introduced by the Department, is gaining favour. There is said to be scope for 250,000 acres, and the increased profit to the cultivator is estimated at £1 or more per acre. In the Central Provinces also, two indigenous varieties have been selected. In the United Provinces seed of a superior variety is being distributed. **Wheat** also has been the subject of prolonged experiments. One of the first results of the investigations carried out at Pusa, was the demonstration of the fact that varieties with milling and baking qualities similar to those of the best wheat on the English market could be grown to perfection in Bihar. By the application of modern methods of selection and hybridisation these high grain qualities were successfully combined with high yielding power, rust-resistance, and strong straw.

Another crop with which considerable success has been attained is **Ground-nut**, the cultivation of which had at the beginning of the decade fallen off, owing partly to the prevalence of a fungoid disease and partly to deficient rainfall. Exotic varieties with a better yield have been introduced in Bombay, and in Burma cultivation has advanced with extraordinary rapidity.

A Press note issued by the Government of Bombay in 1917 details the result of investigations with reference to the value of ground-nut cake as a relatively cheap article of food. It states that with the introduction of certain improvements in the method of oil expression a cake can be obtained, which conforms to a definite standard of purity. This standard is reached without any serious financial outlay on the part of the oil mill owner and with his existing machinery. This standard article has been called *nutramine* both for the sake of simplification of description, and also to indicate its origin and nutritive value. By the improved process, all objections to the ground-nut as an article of food are removed and having obtained a good flour, the possibilities of utilizing it are almost unlimited.

TEN YEARS' PROGRESS.

In 1915, Mr. James Mackenna, I.C.S., Director of Agriculture in Burma, published a brochure in which he reviewed the progress in Agriculture in India in the last ten years. In this, reviewing the effects of the work of the new Agricultural Departments, he said:—

The Agricultural Departments are now regarded as an integral and important part of the administration. The few European and Indian workers of 1905—158 in all—now number 866. Their labours are concentrated and co-ordinated: they now work on general schemes of development. Farms and demonstration plots, formerly scattered and disconnected, have increased from 35 to 374, and work on them is concentrated on the main problems, and not dissipated as used to be the case over a number of subsidiary and unimportant enquiries.

“As a result the Department can claim credit for a great advance in general agricultural practice. Cultural and manurial problems have in many cases been solved. Local machines have been improved and adapted, or better implements introduced. Real and substantial work has been done on the improvement of such important crops as wheat, cotton, rice, sugarcane and tobacco. The general principles of

The preparation of nutramine biscuits has so far been attended with success and everyone who has sampled them has expressed satisfaction. Bread made with nutramine flour alone is apt to be heavy unless eggs are used as recommended in the previous paper. Using a mixture of nutramine and wheat flour in the ratio of 1 to 4 good results are obtained for both bread and biscuits. On the whole such a mixture is preferable, although very palatable biscuits can be made from nutramine alone.

Another success of marked importance achieved by the efforts of the provincial agricultural departments is the introduction of **agricultural implements and machinery** suited to the conditions of different provinces. Information and assistance in regard to the choice of implements suitable for various conditions has, under present circumstances, to be interpreted and brought home to Indian cultivators by a more direct agency than business firms, and the agricultural departments have therefore to do a good deal of this work. They have succeeded already in introducing various kinds of implements in different parts of the country. Every assistance is given in the use and repair of implements recommended. Up to the present, the departments perform to a certain extent the functions of dealers in implements, but it is becoming difficult to control the work as the area covered by the introductions is gradually becoming large, and a need for the development of co-operative societies is felt. In Bombay, the Department has introduced ploughs of various patterns and is selling a larger number each year. In some provinces iron ploughs are becoming very popular. The possibilities of improved harrows, cultivators, and clod-crushers are also receiving attention.

Cotton Staples:—A small commission, under the chairmanship of Mr. J. MacKenna, I. C. S., is now taking evidence in India on the general question of improving the staple and marketing of the Indian cotton crop.

crop improvement have naturally been dealt with first; but given more men and more money all the crops of India will be taken up.

“Money spent on agriculture is a good investment, but material results are difficult to gauge. Many factors have to be considered. A whole industry threatened by destruction may be saved by the discovery and application of preventive and protective methods. The treatment of the palm industry and areca-nut industry of Madras and the protection of the potato crop of Patna are illustrations of this kind. Again, there are the direct gains following the introduction of new or improved crops, implements, well-boring and improved methods of cultivation. We may, at a conservative estimate, claim that the increase to the value of the agricultural products of India as a result of the labours of its Agricultural Departments is already about 3½ crores of rupees annually, or over £2,300,000. This is the result of only ten years' work, and it must be remembered that every year will show a progressive increase. On the debit side we have an annual expenditure on agriculture which has risen from Rs. 8,81,124 or £58,742 in 1904-05 to Rs. 51,30,652 or £342,043 in 1913-14.”

CROPS UNDER CULTIVATION IN 1917-18 : IN ACRES.

Administrations.	Rice.	Wheat.	Barley.	Jawar or Cholum (Great Millet).	Bajra or Cumbu (Spiked Millet).	Ragi or Marua (Millet).
Bengal	20,961,800	124,000	97,100	2,700	5,900	11,200
Madras	11,655,302	15,022	3,072	4,919,200	3,270,264	2,491,915
Bombay { Presidency ..	1,922,783	2,026,495	31,630	8,140,133	3,142,261	644,626
United Pro- { Sind ..	1,158,616	675,361	26,582	566,773	1,018,533	617
vinces. { Agra ..	4,594,083	5,430,603	3,899,337	1,693,351	1,864,100	156,756
{ Oudh ..	2,823,165	1,881,693	1,244,724	288,519	344,976	51,669
Bihar and Orissa	15,646,300	1,199,400	1,337,900	85,400	68,000	863,200
Punjab	1,004,691	9,925,795	1,475,341	825,107	2,542,513	26,782
Burma { Upper ..	2,212,921	44,996	3	610,079	4	500
Central Provinces { Lower ..	8,590,762	3	2,390	..	..	..
{	5,134,701	3,482,279	21,742	1,657,939	33,957	11,228
Berar	36,180	402,076	135	2,162,505	91,511	365
Assam	4,802,794	..	..	..	..	..
North-West Frontier Pro- vince.	37,353	1,143,421	267,149	92,679	227,714	..
Ajmer-Merwara	1,096	21,892	80,605	55,699	22,672	1,247
Delhi	66	52,897	19,965	13,151	57,886	3
Coorg.. .. .	84,912	..	..	..	..	4,763
Manpur Pargana	94	1,971	1	2,145	6	..
TOTAL	80,667,619	26,427,904	8,505,286	21,117,771	12,699,297	4,265,211

Administrations.	Maize.	Gram (pulse).	Other Food Grains and Pulses.	Total Food Grains and Pulses.	Lin- seed.	Sesamum (Til or Jinjili).
Bengal	88,700	187,600	1,204,100	22,683,500	143,900	224,800
Madras	101,966	119,425	7,061,272	29,646,438	13,321	831,742
Bombay { Presidency ..	196,754	774,574	2,504,608	19,383,864	211,510	142,153
United Pro- { Sind ..	1,601	150,418	280,087	3,878,588	..	42,455
vinces. { Agra ..	1,553,077	4,748,083	4,836,251	28,775,641	291,544	183,126
{ Oudh ..	771,593	1,639,073	2,425,702	11,471,114	67,113	5,459
Bihar and Orissa	1,683,700	1,556,000	4,984,900	27,424,800	745,300	274,900
Punjab	1,218,553	6,004,256	1,720,906	24,743,944	39,149	122,323
Burma { Upper ..	155,103	57,103	165,734	3,246,443	261	1,009,911
Central Provinces { Lower ..	23,198	5,495	527	8,622,375	242	82,850
{	157,085	1,019,686	4,383,569	15,902,186	1,207,014	353,998
Berar	972	119,837	592,356	3,405,937	50,313	54,317
Assam	736	*	170,468	4,973,998	11,286	19,124
North-West Frontier Pro- vince.	462,792	226,457	123,713	2,581,278	18	2,789
Ajmer-Merwara	64,578	30,108	71,992	349,889	105	24,352
Delhi	4,142	84,786	16,593	249,489	..	22
Coorg.. .. .	..	161	994	90,771	..	49
Manpur Pargana	958	972	184	6,331	204	62
TOTAL	6,485,508	16,724,034	30,548,956	207,436,586	27,81,280	3,374,432

* Included under "Other Food Grains and Pulses."

CROPS UNDER CULTIVATION IN 1917-18 : IN ACRES.

Administrations.	Rape and Mustard.	Groundnut.	Other Oil-Seeds.	Total Oil-Seeds.	Condi-ments and Spices.	Sugar Cane.	Sugar Others†.
Bengal	1,153,900	..	35,700	1,558,300	172,100	207,400	67,000
Madras	47,833	1,415,239	624,034	2,932,169	692,232	127,379	91,671
Bombay { Presidency	10,102	215,077	299,573	878,415	210,334	92,305	917
United Provinces. { Agra	447,018	1	25,845	515,319	9,783	3,848	2,376
Bihar and Orissa { Oudh	103,169	2,169	19,204	599,212	114,449	1,163,971	..
Punjab	48,963	8,964	465	130,964	31,853	320,278	..
Burma.. { Upper	825,200	..	322,600	2,168,000	83,200	264,700	200
Central Provinces. { Lower	1,258,864	..	5,044	1,425,380	35,955	502,836	..
Berar	421	246,137	30	1,256,760	66,339	3,687	21,890
Assam	3,019	3,221	96	89,428	21,898	16,730	358
North-West Frontier Province. {	52,711	8,829	305,534	1,928,096	68,105	24,798	..
Ajmer-Merwara ..	1,394	3,879	50,460	160,363	24,689	1,744	..
Delhi	263,721	..	..	294,131	..	34,509	..
Coorg	137,652	..	41	140,500	4,481	31,333	..
Manpur Pargana ..	682	..	1,451	26,590	3,134	281	..
..	4,014	..	147	4,183	1,098	12,269	..
..	9	..	6	64	3,424	59	..
..	237	..	..	513	..	77	..
Total ..	4,358,909	1,903,526	1,690,230	14,108,377	1,543,124	2,808,204	184,412

† Area under sugar-yielding plants other than sugarcane.

Administrations.	Cotton.	Jute.	Other Fibres.	Total Fibres.	Indigo.	Other Dyes.
Bengal	51,900	2,376,200	42,700	2,470,800	7,000	..
Madras	2,700,487	..	296,064	2,996,551	324,385	3,361
Bombay { Presidency	4,479,356	..	117,958	4,597,314	564	592,909
United Provinces. { Agra	263,788	..	438	264,226	3,342	613
Bihar and Orissa { Oudh	1,244,756	..	165,230	1,409,986	176,450	1,053
Punjab	59,810	..	47,474	107,284	10,932	37
Burma.. { Upper	69,600	223,600	35,100	323,300	86,700	9,500
Central Provinces. { Lower	1,642,555	..	47,650	1,690,205	90,837	4,019
Berar	212,948	..	91	213,039	371	..
Assam	36,042	..	619	36,661	..	..
North-West Frontier Province. {	1,313,682	..	81,331	1,395,013	27	39
Ajmer-Merwara ..	3,187,637	..	50,414	3,238,051	16	3
Delhi	34,091	100,524	..	134,615	6	..
Coorg	38,233	..	1,455	39,688	15	25
Manpur Pargana ..	61,987	..	326	62,313	39	..
..	5,837	..	793	6,630	83	..
..	1	..	5	6	..	..
..	378	..	28	406	..	..
Total ..	15,403,088	2,700,324	887,676	18,991,088	700,767	611,559

CROPS UNDER CULTIVATION IN 1917-18: IN ACRES.

Administrations.	Opium.	Tea.	Coffee.	Tobacco.	Other Drugs and Nar- cotics.	Fodder Crops.
Bengal .. .. .	..	167,700	..	292,100	4,100	112,700
Madras .. .. .	..	28,367	52,686	207,579	137,206	265,834
Bombay .. { Presidency.	..	20	49	102,423	26,608	1,744,038
.. { Sind ..	..	..	..	7,898	115	68,177
.. { Agra ..	115,732	8,253	..	66,885	1,835	1,046,902
United Pro- vinces .. { Oudh ..	103,462	..	..	18,299	1,121	177,326
Bihar and Orissa ..	..	2,200	..	118,700	500	35,900
Punjab	1,520	9,799	..	62,017	1,634	4,011,642
.. { Upper ..	200	2,275	82	27,078	953	130,553
Burma .. .. .	..	..	..	..	..	..
.. { Lower ..	..	..	3	62,115	38,406	3,986
Central Provinces ..	..	..	..	18,455	158	465,117
Berar .. .. .	..	..	..	12,469	..	202
Assam .. .. .	..	399,790	..	9,539	..	..
North-West Frontier Pro- vince.	..	..	..	8,230	52	91,685
Ajmer-Merwara	286	..	..	60	..	315
Delhi .. .. .	..	..	..	1,001	..	39,547
Coorg .. .. .	..	518	42,491	14	237	..
Manpur Pargana .. ..	..	..	..	..	..	1
Total	221,200	618,922	95,311	1,014,862	212,925	8,193,925

Administrations.	Fruits and Vegetab- les, including Root Crops.	Miscellaneous Crops.		Total Area Cropped.	Deduct Area Cropped more than once.	Net Area Cropped.
		Food.	Non- Food.			
Bengal	646,800	352,800	199,000	28,941,300	4,489,600	24,451,700
Madras	1,137,479	24,992	152,953	38,821,332	4,765,272	34,056,060
Bombay .. { Presidency	498,055	3,539	8,366	28,139,720	839,461	27,300,259
.. { Sind ..	44,781	110	36,007	4,835,183	367,299	4,467,884
.. { Agra ..	321,846	63,759	8,689	63,421,836	7,130,852	27,085,984
United Pro- vinces .. { Oudh ..	131,596	772	514	12,505,552	3,179,291	9,326,261
Bihar and Orissa ..	727,400	536,600	190,200	31,976,900	6,173,500	25,803,400
Punjab	198,613	71,883	17,667	32,867,951	5,705,142	27,162,809
.. { Upper ..	905,800	688	4,457	5,880,615	543,291	5,337,324
Burma .. .. .	..	..	..	..	..	..
.. { Lower ..	486,968	5,329	156,541	9,540,798	52,276	9,488,522
Central Provinces ..	93,339	1,781	488	19,897,602	2,486,353	17,411,249
Berar	14,679	902	520	6,859,575	35,948	6,823,627
Assam	431,264	(a)	166,508	6,444,360	567,736	5,876,624
North-West Frontier Pro- vince	29,302	30,222	1,036	2,957,847	427,306	2,530,541
Ajmer-Merwara	437	13,598	2,657	459,599	94,206	365,393
Delhi	5,104	49	435	319,888	109,130	210,758
Coorg	6,860	..	..	144,444	1,821	142,623
Manpur Pargana	6	..	..	7,324	571	6,753
Total	5,680,329	1,107,024	946,038	264,816,826	36,969,055	227,847,771

(a) Included under non-food crops.

(b) Includes 342,173 acres in the Agra Province for which details are not available.

The following is a summary of the various **crop forecasts** relating to the season 1918-19 issued by the Department of Statistics, India, up to June 1919:—

Crop.	Tracts comprised in the figures and percentage of total Indian crop represented by them.	Estimated Area.	Per cent. of preceding year (100=final figure of preceding year).	Estimated outturn.	Per cent. of preceding year (100=final figure of preceding year.)
		Acres.			
Sugarcane	U. P., Punjab, Bihar and Orissa, Bengal, Madras, Bombay and Sind*, Assam, N.-W. F. Province and C. P., and Berar (99·1 per cent. of total sugarcane area of British India).	2,820,000	100	2,337,000 tons.	71
Sesamum	U. P., C. P. and Berar, Madras, Bombay and Sind*, Bengal, Bihar and Orissa, Punjab, Ajmer-Merwara and Hyderabad (76 per cent. of the total Sesamum area of British India).	3,501,000	82	258,000 tons.	68
Cotton	All cotton-growing tracts	20,497,000	81	3,671,000 bales.	92
Indigo	All indigo-growing tracts	300,700	42	44, 100 cwts.	50
Groundnut	Madras, Bombay* and Burma (99·2 per cent. of total groundnut area of British India).	1,312,000	68	499,000 tons.	45
Rice	Bengal, Bihar and Orissa, Madras, Burma, U. P., Assam, C. P. and Berar, Bombay, Sind*, and Coorg. (99 per cent. of total rice area of British India).	75,864,000	95	23,822,000 tons.	66
Jute †	Bengal, Bihar and Orissa, and Assam (100 per cent. of the total Jute area in India).	2,497,214	91·3	7,009,060 bales.	78·4
Rape and Mustard.	U. P., Bengal, Punjab, Bihar and Orissa, Assam, Bombay and Sind*, N.-W. Frontier and Hyderabad. (98·6 per cent. of total rape and mustard area in British India).	4,833,000	68	758,000 tons.	66
Linseed	C. P. and Berar, U. P., Bihar and Orissa, Bengal, Bombay* Punjab and Hyderabad (98·9) per cent. of total linseed area in British India).	1,972,000	52	229,000	45
Wheat	Punjab, *U. P., C. P., and Berar,* Bombay and Sind*, Bihar and Orissa, N.-W. F. Province, Bengal, Delhi, Ajmer-Merwara, Central India, Hyderabad, Rajputana and Mysore (98·6 per cent. of total wheat area in India).	23,566,000	66	7,407,000 tons.	75

* Including Indian States.

† Issued by the Director of Agriculture, Bengal,

Meteorology.

The meteorology of India like that of other countries is largely a result of its geographical position. The great land area of Asia to the northward and the enormous sea expanse of the Indian Ocean to the southward are determining factors in settling its principal meteorological features. When the Northern Hemisphere is turned away from the sun, in the northern winter, Central Asia becomes an area of intense cold. The meteorological conditions of the temperate zone are pushed southward and we have over the northern provinces of India the westerly winds and eastward moving cyclonic storms of temperate regions, while, when the Northern Hemisphere is turned towards the sun, Southern Asia becomes a super-heated region drawing towards it an immense current of air which carries with it the enormous volume of water vapour which it has picked up in the course of its long passage over the wide expanse of the Indian Ocean, so that at one season of the year parts of India are deluged with rain and at another persistent dry weather prevails.

Monsoons.—The all-important fact in the meteorology of India is the alternation of the seasons known as the summer and winter monsoons. During the winter monsoon the winds are of continental origin and hence, dry, fine weather, clear skies, low humidity and little air movement are the characteristic features of this season. The summer rains cease in the provinces of the North-West Frontier Province and the Punjab about the middle of September after which cool westerly and northerly winds set in over that area and the weather becomes fresh and pleasant. These fine weather conditions extend slowly eastward and southward so that by the middle of October, they embrace all parts of the country except the southern half of the Peninsula, and by the end of the year have extended to the whole of the Indian land and sea area, the rains withdrawing to the Equatorial Belt. Thus the characteristics of the cold weather from October to February over India are:—Westerly winds of the temperate zone over the extreme north of India; to the south of these the north-east winds of the winter monsoon or perhaps more properly the north-east Trades and a gradually extending area of fine weather which, as the season progresses, finally embraces the whole Indian land and sea area. Two exceptions to these fine weather conditions exist during this period, *viz.*, the Madras coast and the north-west of India. In the former region the north-east winds which set in over the Bay of Bengal in October coalesce with the damp winds of the retreating summer monsoon, which current curves round over the Bay of Bengal, and, blowing directly on to the Madras coast gives to that region the wettest and most disturbed weather of the whole year, for while the total rainfall for the four months June to September, *i.e.*, the summer monsoon, at the Madras Observatory amounts to 15.36 inches the total rainfall for the three months October to December amounts to 29.48 inches. The other region in which the weather is unsettled, during this period of generally settled conditions, is North-west India. This region during January, February and part of March is traversed by

a succession of shallow storms from the westward. The number and character of these storms vary very largely from year to year and in some years no storms at all are recorded. In normal years, however, in Northern India periods of fine weather alternate with periods of disturbed weather (occurring during the passage of these storms) and light to moderate and even heavy rain occurs. In the case of Peshawar the total rainfall for the four months, December to March, amounts to 5.26 inches while the total fall for the four months, June to September, is 4.78 inches, showing that the rainfall of the winter is, absolutely, greater in this region than that of the summer monsoon. These two periods of subsidiary "rains" are of the greatest economic importance. The fall in Madras is, as shown above, of considerable actual amount, while that of North-west India though small in absolute amount is of the greatest consequence as on it largely depend the grain and wheat crops of Northern India.

Spring Months.—March to May and part of June form a period of rapid continuous increase of temperature and decrease of barometric pressure throughout India. During this period there occurs a steady transference northward of the area of greatest heat. In March the maximum temperatures, slightly exceeding 100°, occur in the Deccan; in April the area of maximum temperature, between 100° and 105°, lies over the south of the Central Provinces and Gujarat; in May maximum temperatures, varying between 105° and 110°, prevail over the greater part of the interior of the country while in June the highest mean maximum temperatures exceeding 110° occur in the Indus Valley near Jacobabad. Temperatures exceeding 120° have been recorded over a wide area including Sind, Rajputana; the West and South Punjab and the west of the United Provinces, but the highest temperature hitherto recorded is 126° registered at Jacobabad on June 12th, 1897. During this period of rising temperature and diminishing barometric pressure, great alterations take place in the air movements over India, including the disappearance of the north-east winds of the winter monsoon, and the air circulation over India and its adjacent seas, becomes a local circulation, characterised by strong hot winds down the river valleys of Northern India and increasing land and sea winds in the coast regions. These land and sea winds, as they become stronger and more extensive, initiate large contrasts of temperature and humidity which result in the production of violent local storms. These take the forms of dust storms in the dry plains of Northern India and of thunder and hailstorms in regions where there is inter-action between damp sea winds and dry winds from the interior. These storms are frequently accompanied with winds of excessive force, heavy hail and torrential rain and are on that account very destructive.

By the time the area of greatest heat has been established over North-west India, in the last week of May or first of June, India has become the seat of low barometric pressures relatively to the adjacent seas and the whole character of the weather changes. During

the hot weather period, discussed above, the winds and weather are mainly determined by local conditions. Between the Equator and Lat. 30° or 35° south the wind circulation is that of the south-east trades, that is to say from about Lat. 30° - 35° south a wind from south-east blows over the surface of the sea up to about the equator. Here the air rises into the upper strata to flow back again at a considerable elevation to the Southern Tropic or beyond. To the north of this circulation, i.e., between the Equator and Lat. 20° to 25° North, there exists a light unsteady circulation, the remains of the north-east trades, that is to say about Lat. 20° North there is a north-east wind which blows southward till it reaches the thermal equator where side by side with the south-east Trades mentioned above, the air rises into the upper strata of the atmosphere. Still further to the northward and in the immediate neighbourhood of land there are the circulations due to the land and sea breezes which are attributable to the difference in the heating effect of the sun's rays over land and sea. It is now necessary to trace the changes which occur and lead up to the establishment of the south-west monsoon period. The sun at this time is progressing slowly northward towards the northern Tropic. Hence the thermal equator is also progressing northward and with it the area of ascent of the south-east trades circulation. Thus the south-east trade winds cross the equator and advance further and further northward, as the thermal equator and area of ascent follows the sun in its northern progress. At the same time the temperature over India increases rapidly and barometric pressure diminishes, owing to the air rising and being transferred to neighbouring cooler regions—more especially the sea areas. Thus we have the southern Trades circulation extending northward and the local land and sea circulation extending southward until about the beginning of June the light unsteady interfering circulation over the Arabian Sea finally breaks up, the immense circulation of the south-east Trades, with its cool, moisture laden winds rushes forward, becomes linked on to the local circulation proceeding between the Indian land area and the adjacent seas and India is invaded by oceanic conditions—the **south-west monsoon** proper. This is the most important season of the year as upon it depends the prosperity of at least five-sixths of the people of India.

When this current is fully established a continuous air movement extends over the Indian Ocean, the Indian seas and the Indian land area from Lat. 30° S. to Lat. 30° N. the southern half being the south-east trades and the northern half the south-west monsoon. The most important fact about it is that it is a continuous horizontal air movement passing over an extensive oceanic area where steady evaporation is constantly in progress so that where the current enters the Indian seas and flows over the Indian land it is highly charged with aqueous vapours.

The Current enters the Indian seas quite at the commencement of June and in the course of the succeeding two weeks spreads over the Arabian Sea and Bay of Bengal up to their

extreme northern limits. It advances over India from these two seas. The Arabian sea current blows on to the west coast and sweeping over the Western Ghats prevails more or less exclusively over the Peninsula, Central India, Rajputana and north Bombay. The Bay of Bengal current blows directly up the Bay. One portion is directed towards Burma, East Bengal and Assam while another portion curves to south at the head of the Bay and over Bengal, and then meeting with the barrier of the Himalayas curves still further and blows as a south-easterly and easterly wind right up the Gangetic plain. The south-west monsoon continues for three and a half to four months, viz., from the beginning of June to the middle or end of September. During its prevalence more or less general though far from continuous rain prevails throughout India the principal features of the rainfall distribution being as follows. The greater portion of the Arabian Sea current, the total volume of which is probably three times as great as that of the Bengal current, blows directly on to the west coast districts. Here it meets an almost continuous hill range, is forced into ascent and gives heavy rain alike to the coast districts and to the hilly range, the total averaging about 100 inches most of which falls in four months. The current after parting with most of its moisture advances across the Peninsula giving occasional uncertain rain to the Deccan and passes out into the Bay where it coalesces with the local current. The northern portion of the current blowing across the Gujarat, Kathiawar and Sind coasts gives a certain amount of rain to the coast districts and frequent showers to the Aravalli Hill range but very little to Western Rajputana, and passing onward gives moderate to heavy rain in the Eastern Punjab, Eastern Rajputana and the North-west Himalayas. In this region the current meets and mixes with the monsoon current from the Bay.

The monsoon current over the southern half of the Bay of Bengal blows from south-west and is thus directed towards the Tenasserim hills and up the valley of the Irrawaddy to which it gives very heavy to heavy rain. That portion of this current which advances sufficiently far northward to blow over Bengal and Assam gives very heavy rain to the low-lying districts of East Bengal and immediately thereafter coming under the influence of the Assam Hills is forced upwards and gives excessive rain (perhaps the heaviest in the world) to the southern face of these hills. The remaining portion of the Bay current advances from the southward over Bengal, is then deflected westward by the barrier of the Himalayas and gives general rain over the Gangetic plain and almost daily rain over the lower ranges of the Himalayas from Sikhim to Kashmir.

To the south of this easterly wind of the Bay current and to the north of the westerly wind of the Arabian Sea current there exists a debatable area running roughly from Hissar in the Punjab through Agra, Allahabad and part of Chota Nagpur to Orissa, where neither current of the monsoon prevails. In this area the rainfall is uncertain and would probably

be light, but that the storms from the Bay of Bengal exhibit a marked tendency to advance along this track and to give it heavy falls of occasional rain.

The Total Rainfall of the monsoon period (June to September) is 100 inches over part of the west coast, the amount diminishes eastward, is below 20 inches over a large part of the centre and east of the Peninsula and is only 5 inches in South Madras; it is over 100 inches on the Tenasserim and South Burma coast and decreases to 20 inches in Upper Burma; it is over 100 in the north Assam Valley and diminishes steadily westward and is only 5 inches in the Indus Valley.

The month to month distribution for the whole of India is:—

May	..	..	2·6	inches
June	..	..	8·3	„
July	..	..	11·9	„
August	..	..	10·5	„
September	..	..	7·2	„
October	..	..	3·2	„

Cyclonic storms and cyclones are an almost invariable feature of the monsoon period. In the Arabian Sea they ordinarily form at the commencement and end of the season, viz., May and November, but in the Bay they form a constantly recurring feature of the monsoon season. The following gives the total number of storms recorded during the period 1877 to 1901 and shows the monthly distribution:—

	Jan.	Feb.	Mar.	Apl.	May	June
Bay of Bengal	..	..	1	4	13	28
	July	Aug.	Sep.	Oct.	Nov.	Dec.
Bay of Bengal	41	36	45	34	22	8
	Jan.	Feb.	Mar.	Apl.	May	June
Arabian Sea	..	..	..	2	15	

July Aug. Sep. Oct. Nov. Dec.

Arabian Sea 2 .. 1 1 5 ..

The preceding paragraphs give an account of the normal procession of the seasons throughout India during the year, but it must be remembered, that every year produces **variations from the normal**, and that in some years these variations are very large. This is more particularly the case with the discontinuous element rainfall. The most important variations in this element which may occur are:—

- (1) Delay in the commencement of the rains over a large part of the country, this being most frequent in North Bombay and North-west India.
- (2) A prolonged break in July or August or both.
- (3) Early termination of the rains, which may occur in any part of the country.
- (4) The determination throughout the monsoon period of more rain than usual to one part and less than usual to another part of the country. Examples of this occur every year.

About the middle of September fine and fresh weather begins to appear in the extreme north-west of India. This area of fine weather and dry winds extends eastward and southward, the area of rainy weather at the same time contracting till by the end of October the rainy area has retreated to Madras and the south of the Peninsula and by the end of December has disappeared from the Indian region, fine clear weather prevailing throughout. This procession with the numerous variations and modifications which are inseparable from meteorological conditions repeats itself year after year.

(For monsoon of 1919, see page 304).

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.	Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
HILL STATIONS.														
* Shillong	4,920	49.5	51.8	60.4	65.2	66.6	68.8	70.0	69.2	68.4	63.1	56.5	50.7	61.7
Darjeeling	7,376	40.1	41.6	49.7	56.2	58.3	59.9	61.5	60.9	59.4	55.2	47.8	41.8	52.7
* Simla	7,224	38.8	40.6	51.5	59.3	66.0	66.9	64.3	62.8	60.9	56.7	50.1	43.4	55.1
Murree	6,333	40.5	41.1	51.1	61.2	68.3	72.3	69.4	67.2	65.9	61.3	52.8	45.0	58.0
Srinagar	5,204	30.7	33.0	45.1	55.7	63.9	69.9	73.0	70.8	64.0	53.2	44.0	36.3	53.3
Mount Abu	3,945	58.2	61.0	69.9	78.0	79.8	74.9	69.8	67.6	69.6	71.6	65.2	59.9	68.8
* Ootacamund	7,327	54.0	55.5	58.6	61.5	61.3	58.2	56.9	57.4	57.3	57.2	55.4	54.3	57.3
* Kodaikanal	7,688	55.0	56.7	59.6	61.5	61.9	59.4	57.6	57.8	57.6	56.9	54.9	55.0	57.8
COAST STATIONS.														
Karachi	49	65.3	68.4	75.0	80.6	84.7	86.8	84.3	82.4	82.0	80.0	74.0	67.4	77.6
Veraval	18	69.4	70.2	74.0	79.1	81.5	82.5	80.0	79.1	79.0	79.5	77.2	72.3	77.0
Bombay	37	74.5	74.8	78.0	82.1	84.6	82.4	79.5	79.4	79.4	80.7	79.3	76.4	79.3
Ratnagiri	110	76.2	76.0	78.5	82.8	84.3	80.7	78.3	78.4	78.2	79.8	79.5	77.6	79.2
Mangalore	65	78.2	79.3	81.1	88.9	83.5	78.8	77.1	77.3	77.6	78.9	79.8	79.0	79.6
Calicut	27	77.8	79.8	81.6	83.6	83.1	78.5	76.7	77.4	78.3	79.1	79.5	78.3	75.9
Nagapatam	31	75.5	77.4	80.5	84.8	87.7	87.0	85.6	84.4	83.4	80.9	78.3	76.0	81.8
Madras	22	75.3	76.6	79.5	84.1	88.7	88.4	85.7	84.5	83.9	80.8	77.9	75.7	81.8
Masulipatam	15	73.6	76.7	80.3	85.2	89.8	87.8	83.9	83.4	83.0	81.2	77.4	74.0	81.4
Gopalpur	21	70.0	74.8	78.3	81.6	84.1	83.7	81.8	82.0	82.2	79.6	74.3	69.8	78.6
Rangoon	57	74.7	77.3	81.2	85.0	82.2	79.5	78.8	78.7	79.1	80.0	78.3	75.6	79.2

* As the average mean figures for Shillong, Ootacamund and Kodaikanal are not available, means of normal maximum and minimum temperatures uncorrected for diurnal variation are given.

Average Monthly and Annual Means of Air Temperature at Selected Stations in India.

Stations.		Elevation in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Mean.
STATIONS ON THE PLAINS.															
Toungoo	..	183	70.0	74.7	81.9	86.7	85.3	81.3	80.1	80.1	81.3	81.4	77.4	71.6	72.3
Mandalay	..	250	68.8	73.8	82.1	89.2	88.5	85.4	85.2	84.7	83.5	82.5	75.9	69.5	80.8
Silchar	..	104	63.8	67.0	73.9	78.0	80.1	81.4	82.6	82.4	81.7	79.7	73.1	66.1	75.9
Calcutta	..	21	65.2	70.3	79.3	85.0	85.7	83.0	83.0	82.4	82.6	80.0	72.4	65.3	77.9
Burdwan	..	99	65.7	70.0	80.4	86.7	86.5	84.9	83.6	82.8	83.1	80.7	72.0	66.3	78.6
Fatna	..	183	60.8	65.3	76.9	86.2	88.0	86.4	83.5	83.1	83.3	79.5	70.1	62.2	77.1
Benares	..	267	60.8	65.3	76.6	86.8	91.3	89.4	84.1	83.1	83.0	77.9	67.8	60.2	77.2
Allahabad	..	209	59.5	64.3	76.8	87.6	92.5	90.8	84.5	83.2	83.0	77.6	67.5	59.8	77.3
Lucknow	..	368	58.7	63.7	75.2	86.4	90.6	90.2	85.3	83.4	83.2	77.1	66.3	58.9	76.6
Aggra	..	555	60.1	64.8	76.7	88.1	94.0	93.4	86.0	84.2	84.2	79.4	68.7	61.2	78.4
Mierut	..	738	56.0	60.1	71.1	82.7	88.4	89.4	85.0	83.2	81.7	74.7	63.5	56.7	74.4
Delhi	..	718	57.9	62.2	74.1	86.2	91.7	92.2	86.4	84.5	83.9	78.5	67.6	59.6	77.1
Lahore	..	702	53.0	57.3	69.0	80.9	88.9	93.0	89.1	87.1	84.8	75.7	63.2	54.6	74.7
Multan	..	420	55.6	59.8	71.6	82.9	91.4	94.9	92.7	90.4	88.0	78.6	67.1	57.7	77.5
Jacobabad	..	186	57.3	62.4	74.5	85.5	94.3	97.7	95.0	91.6	88.8	79.2	67.5	58.9	79.3
Hyderabad (Sind)	..	96	63.6	67.1	77.6	86.2	91.6	91.7	88.6	86.0	86.0	82.7	73.4	65.0	73.9
Bikaner	..	771	59.2	63.6	76.6	88.4	94.1	94.7	90.4	87.3	87.4	82.4	70.5	61.4	79.6
Rajkote	..	429	66.8	70.0	77.4	85.1	89.2	87.5	81.7	80.6	80.8	80.4	74.1	68.4	78.5
Ahmedabad	..	163	70.3	74.0	82.7	91.2	92.9	89.4	83.7	83.0	83.5	81.3	78.3	72.9	82.1
PLATEAU STATIONS.															
Akola	..	930	68.5	73.7	81.9	90.1	93.3	86.2	80.6	78.9	79.7	77.9	71.7	66.8	79.2
Jubbulpore	..	1,357	61.8	66.8	76.5	86.3	91.9	85.7	79.0	78.0	79.0	71.8	66.6	60.3	75.6
Nagpore	..	1,025	68.8	74.3	82.4	90.6	94.5	86.6	80.4	78.0	80.4	78.4	72.2	67.1	79.6
Raipur	..	970	67.7	73.6	81.9	90.3	93.6	86.0	79.6	79.0	80.3	78.1	71.5	66.0	79.0
Ahmednagar	..	2,152	67.1	71.3	77.5	82.5	83.8	79.2	76.2	74.9	74.5	75.1	70.5	67.1	75.0
Poona	..	1,840	69.8	73.9	80.1	83.9	83.8	78.7	74.9	73.7	74.4	76.2	72.5	68.9	75.9
Sholapur	..	1,590	72.7	77.7	84.2	88.4	88.9	81.8	78.9	77.7	77.3	77.7	74.6	71.3	79.3
Belgaum	..	2,589	69.8	73.0	77.5	79.2	78.0	72.8	70.1	69.7	70.4	72.9	70.9	69.3	72.8
Hyderabad (Deccan)	..	1,030	70.4	77.1	83.1	88.0	90.1	82.6	77.9	77.1	77.4	76.8	72.3	69.1	78.5
Bangalore	..	2,021	67.5	72.0	76.7	79.3	78.5	74.0	72.0	71.8	71.8	71.8	69.6	67.5	72.8
Bellary	..	1,475	73.2	79.6	85.6	89.2	89.0	83.4	80.9	80.6	80.2	79.1	73.3	72.5	80.8

Average Monthly and Annual Rainfall at Selected Stations in India.

Stations.	Eleva- tion in feet.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann- ual Total.
STATIONS ON THE PLAINS.														
Toumgoo	183	in. 0.06	in. 0.12	in. 0.08	in. 1.90	in. 6.43	in. 13.63	in. 17.48	in. 18.53	in. 11.46	in. 6.95	in. 1.25	in. 0.16	in. 78.05
Mandalay	250	0.06	0.08	0.21	5.26	5.71	3.26	3.26	4.54	6.21	4.54	1.67	0.28	32.63
Silchar	104	0.64	2.32	7.93	13.56	15.72	20.39	19.98	18.69	13.95	6.40	1.31	0.54	121.43
Calcutta	21	0.29	1.02	1.14	1.54	5.60	11.04	12.31	12.69	10.40	3.87	0.62	0.31	60.83
Burdwan	99	0.38	0.89	1.24	2.20	5.56	10.17	12.32	11.49	8.59	3.93	0.64	0.13	57.54
Patna	183	0.72	0.53	0.35	0.30	1.70	7.76	11.41	10.72	7.82	2.89	0.20	0.14	44.54
Benares	267	0.74	0.51	0.33	0.15	0.56	5.45	12.54	11.19	6.54	2.24	0.17	0.17	40.59
Alahabad	309	0.82	0.48	0.38	0.14	0.29	5.09	12.24	10.88	6.32	2.40	0.25	0.23	39.52
Lucknow	368	0.90	0.45	0.32	0.11	0.31	5.34	11.39	11.32	6.61	1.33	0.08	0.44	39.20
Agra	555	0.55	0.33	0.25	0.16	0.64	2.84	9.67	7.11	4.41	0.39	0.06	0.29	26.70
Meerut	738	1.05	0.83	0.63	0.34	0.70	3.60	9.37	7.64	4.55	0.43	0.08	0.40	29.62
Delhi	718	1.02	0.61	0.67	0.35	0.71	3.18	8.38	7.44	4.42	0.39	0.11	0.43	27.70
Lahore	702	0.87	1.13	0.89	0.51	0.80	1.86	6.65	4.88	2.10	0.43	0.11	0.47	20.70
Multan	420	0.39	0.36	0.42	0.27	0.39	0.43	2.19	1.66	0.60	0.07	0.06	0.27	7.11
Jacobabad	186	0.28	0.27	0.25	0.17	0.15	0.10	1.18	1.25	0.19	0.01	0.10	0.15	4.10
Hyderabad (Sind)	96	0.24	0.22	0.10	0.07	0.11	0.41	2.61	2.77	0.54	0.00	0.10	0.05	7.22
Bikaner	771	0.38	0.24	0.18	0.14	0.84	1.65	3.29	3.14	1.08	0.09	0.06	0.18	11.27
Raikote	429	0.05	0.10	0.01	0.01	0.31	5.21	10.89	6.41	3.75	0.67	0.33	0.06	27.80
Ahmedabad	163	0.02	0.10	0.01	0.03	0.46	3.94	11.49	8.26	4.42	0.55	0.19	0.05	29.52
PLATEAU STATIONS.														
Akola	930	0.45	0.18	0.43	0.16	0.31	5.12	8.74	6.48	6.24	2.14	0.44	0.58	31.27
Jubbulpore	1,327	0.72	0.52	0.48	0.22	0.47	8.53	18.82	15.13	8.38	1.55	0.37	0.26	55.45
Nagpore	1,025	0.58	0.42	0.57	0.46	0.68	8.44	13.49	9.79	8.11	2.14	0.51	0.43	45.62
Raipur	970	0.30	0.23	0.59	0.59	0.76	9.38	14.94	12.72	7.75	2.09	0.62	0.20	50.27
Ahmednagar	2,152	0.27	0.12	0.15	0.40	1.16	4.73	3.03	3.60	6.75	3.12	0.89	0.44	24.66
Poona	1,840	0.18	0.05	0.13	0.58	1.45	5.35	6.90	4.03	4.43	4.11	0.85	0.30	28.26
Sholapur	1,590	0.06	0.08	0.29	0.63	1.09	4.41	4.19	5.42	7.77	3.63	0.87	0.20	28.74
Belgaum	2,539	0.06	0.03	0.49	2.05	2.73	9.32	15.37	9.15	4.05	5.09	1.33	0.24	49.91
Hyderabad (Deccan)	1,690	0.05	0.12	0.67	0.73	0.78	4.44	6.22	6.76	7.10	2.98	1.53	0.17	31.55
Bangalore	3,021	0.06	0.22	0.72	1.19	4.53	3.13	4.13	6.00	7.11	6.74	2.61	0.39	36.83
Bellary	1,475	0.10	0.03	0.42	0.83	1.93	1.84	1.41	2.18	4.12	4.04	1.20	0.20	18.30

MONSOON OF 1919.

Though the conditions which initially obtained about the end of May were by no means promising the progress of the monsoon during the year was on the whole normal. The rainfall gathered on the plains of India from June to October was 42·5 inches against the normal fall of 41·1 inches, indicating an excess of 3 per cent. This is in marked contrast with the remarkable failure of the rains of the preceding year, which left a defect of 21 per cent.

Initially, the S. W. current appeared generally to be below its normal strength. This was specially apparent in the Arabian Sea branch, which feeds Western India. The monsoon carried by this branch of the current appeared in the Peninsula about the normal date, while the relatively stronger Bay branch, influenced by the timely and concurrent rise of a storm in the Bay, was accelerated in its advent and carried the monsoon rains into north-east India fully a week before the usual normal date. Good rain was gathered up to about the middle of the month of June, after which a longish break supervened, and it was quite late in the month when some useful rain was received in Gujarat, Kathiawar and South, Rajputana. The total fall for the month, over the whole of India, was 8·7 inches, which was 0·4 inch in excess of the normal.

The monsoon continued fairly active during the early part of the month of July, but its effects were in the main confined to an unusual extent to north-east India and the central parts of the country. Later, however, the conditions of distribution became extremely favourable, in all directions and good rain was gathered in north-west India, where it was sorely needed. These conditions affected practically all parts of the country and the total rain registered during the month was 12·2 inches, being 0·3 inch in excess of the normal. In August both branches of the S. W. current were kept extremely active by the influence of successive Bay storms, six of which arose one after another during the month, and though practically the whole country except small tracts towards the extreme east and south had a fair share of this copious precipitation, much of the rain-

fall was in the main concentrated along the tracks of the paths of the storms from Orissa to Gujarat. The total rain over the plains of India for the month was 12·5 inches, against the normal of 10·5 inches for the month giving an excess of 19 per cent. During September, though conditions remained fairly favourable, considerable decrease in the activity of both the currents ensued, and in the altered distribution of conditions the Peninsula being favourably placed it gathered more than its normal share of the precipitation at the expense of Northern and Central India. The fall during the month was 6·3 inches only against the normal of 7·2 inches.

In its recession, which prolonged in duration on the whole, the monsoon gave good rain practically over the whole country during the first week in October, and by the middle of the month the activity of the receding monsoon was mainly restricted to the south of the Peninsula and Burma. The current was however weaker than usual during the month, the total rain registered during the month being 2·8 inches, against the normal of 3·2 inches.

The run of the season on the whole was normal. The notable feature of the year was the rise of 10 Bay storms—2 in June, 1 in July, 6 in August, and 1 in September, which undoubtedly much influenced the favourable course of the monsoon. Two of these storms need special mention. One of these developing in the Bay crossed the Orissa coast on the 1st August and travelling in its usual north-westerly course, caused an exceedingly heavy downpour in the neighbourhood of Mount Abu and Deesa, as much as 23 inches being recorded in 48 hours at the former station and 12 inches at the latter. The storm which developed in the Bay west of the Andamans on the 22nd September crossed the coast on the 24th and reached Dacca on the 25th September. Though small in extent it was concentrated in intensity in the centre and caused great damage to life and property along its track in Eastern Bengal.

The following tables give details of the rainfall in the several divisions, and the condition of weekly rainfall from June to October in the provinces and sub-divisions:—

RAINFALL JUNE TO OCTOBER 1919.				
DIVISION.	Actual.	Normal.	Departure from normal.	Percentage departure from normal.
	Inches.	Inches.	Inches.	Inches.
Burma	93·6	92·1	+1·5	+2
Assam	62·4	65·3	-2·9	-4
Bengal	66·4	64·6	+1·8	+3
Bihar and Orissa	53·4	48·6	+4·8	+10
United Provinces	38·1	37·5	+0·6	+2
Punjab	16·3	15·7	+0·6	+4
North-West Frontier	4·6	5·0	-0·4	-8
Sind	3·3	4·8	-1·5	-31
Rajputana	17·7	17·7	....	....
Bombay	40·2	40·5	-0·3	-1
Central India	47·6	34·5	+13·1	+38
Central Provinces	50·3	42·7	+7·6	+18
Hyderabad	24·1	29·1	-5·0	-17
Mysore	21·4	21·2	+0·2	+1
Madras	32·6	34·6	-2·0	-6
Mean of India	42·5	41·1	+1·4	+4

THE RAINS OF 1919.

The following table shows the condition of weekly rainfall during the monsoon period from June to October 1919.
(Abbreviations—S = Scanty, F = Fair, N = Normal, Ex = Excess.)

Province and Sub-division.	JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER					
	week ending				week ending				week ending				week ending				week ending					
	3rd	10th	17th	24th	1st	8th	15th	22nd	29th	5th	12th	19th	26th	2nd	9th	16th	23rd	30th	7th	14th	21st	28th
Bombay—																						
Gujarat	Ex	Ex	Ex	S	N	N	S	N	Ex	Ex	Ex	F	Ex	F	Ex	S	Ex	Ex	Ex	Ex	S	S
Konkan	Ex	Ex	Ex	S	Ex	Ex	S	Ex	N	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
Bombay, Deccan	Ex	Ex	Ex	S	Ex	Ex	S	Ex	F	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
Sind	S	S	S	S	S	S	S	Ex	F	Ex	Ex	S	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	N	S
Bengal	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	N	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	N	S
Assam	N	N	N	Ex	N	N	Ex	Ex	F	S	S	N	Ex	N	Ex	S	Ex	Ex	Ex	Ex	S	F
Bihar and Orissa—																						
Orissa	Ex	Ex	Ex	N	Ex	Ex	Ex	Ex	F	Ex	Ex	S	Ex	Ex	Ex	S	S	F	Ex	Ex	S	N
Chota Nagpur	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	F	F	F	Ex	Ex	S	Ex
Bihar	Ex	Ex	Ex	N	Ex	Ex	N	Ex	N	Ex	N	N	Ex	N	Ex	F	F	Ex	Ex	Ex	S	N
United Provinces—																						
East	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
West	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
Punjab—																						
East and North	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	F	Ex	Ex	Ex	Ex	S	S
South-West	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
North-West Frontier Province	S	S	S	S	S	S	F	S	Ex	Ex	Ex	Ex	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
Central Provinces—																						
Berar	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	N	Ex	Ex	Ex	Ex	S	S
West	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S
East	Ex	Ex	Ex	N	Ex	Ex	N	Ex	F	Ex	Ex	F	Ex	Ex	Ex	S	Ex	Ex	Ex	Ex	S	S

Note.—The thinner and more italic the Statement, the scantier the monsoon. On the other hand, the thicker the black type in the Statement, the more abundant the monsoon.

The following table shows the condition of weekly rainfall during the monsoon period from June to October 1919.

(Abbreviations S = Scanty, F = Fair, N = Normal, Ex = Excess.)

Province and Sub-division.	JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER					
	week ending				week ending				week ending				week ending				week ending					
	3rd	10th	17th	24th	1st	8th	15th	22nd	29th	5th	12th	19th	26th	2nd	9th	16th	23rd	30th	7th	14th	21st	28th
Central India—																						
West ..	Ex	Ex	S	F	Ex	N	Ex	N	N	Ex	N	Ex	N	Ex	S	S	Ex	S	Ex	S	S	S
East ..	Ex	Ex	S	F	Ex	N	Ex	N	N	Ex	N	Ex	N	Ex	S	S	Ex	S	Ex	S	S	S
Rajputana—																						
West ..	S	S	S	S	S	S	S	Ex	N	F	N	Ex	Ex	Ex	S	S	Ex	S	S	S	S	S
East ..	Ex	Ex	S	S	Ex	F	Ex	N	N	Ex	N	Ex	Ex	Ex	F	S	Ex	S	S	S	S	S
Madras—																						
Malabar ..	F	S	S	F	Ex	N	Ex	N	Ex	Ex	S	N	F	N	S	F	Ex	Ex	N	F	F	N
South-East ..	Ex	Ex	S	N	Ex	N	Ex	N	Ex	S	S	N	F	F	S	Ex	Ex	Ex	S	S	Ex	S
Deccan ..	Ex	Ex	S	N	Ex	N	Ex	N	Ex	S	S	N	F	F	S	Ex	Ex	Ex	F	S	S	S
Coast North ..	Ex	Ex	N	S	Ex	F	Ex	N	Ex	Ex	F	Ex	N	Ex	N	Ex	Ex	Ex	Ex	N	S	Ex
Burma—																						
Lower ..	Ex	Ex	N	N	Ex	Ex	N	S	N	Ex	Ex	N	N	Ex	N	F	S	S	F	N	N	F
Upper ..	N	N	N	N	Ex	N	Ex	Ex	Ex	Ex	F	N	N	N	Ex	F	F	Ex	N	F	S	N
Bay Islands ..	N	N	N	N	Ex	S	S	S	Ex	F	S	S	Ex	Ex	S	F	S	F	N	S	S	Ex
Hyderabad—																						
North ..	Ex	Ex	S	F	Ex	F	S	S	Ex	F	S	F	Ex	S	S	S	Ex	Ex	Ex	N	S	S
South ..	Ex	Ex	Ex	Ex	F	F	F	F	Ex	F	S	F	Ex	F	S	N	F	Ex	Ex	Ex	S	S
Mysore ..	Ex	Ex	S	N	Ex	N	N	N	N	N	S	F	N	S	F	Ex	Ex	Ex	S	F	F	S
Kashmir ..	S	S	S	Ex	S	S	S	S	Ex	N	N	Ex	Ex	N	F	S	Ex	Ex	F	S	S	S
Baluchistan ..	S	S	S	S	S	S	S	Ex	Ex	Ex	S	S	F	S	S	S	Ex	Ex	S	S	S	S

Note.—The thinner and more italic the Statement, the scantier the monsoon. On the other hand, the thicker the black type in the Statement, the more abundant the monsoon.

THE RAINS OF 1918.

The following table shows the condition of weekly rainfall during the monsoon period from June to October 1918.

(Abbreviations—S = Scanty, F = Fair, N = Normal, Ex = Excess.)

Province and Sub-division.	JUNE				JULY				AUGUST			SEPTEMBER				OCTOBER						
	week ending				week ending				week ending			week ending				week ending						
	11th	18th	25th		2nd	9th	16th	23rd	30th	6th	13th	20th	27th	3rd	10th	17th	24th	1st	8th	15th	22nd	29th
Bombay—																						
Gujarat ..	S	S	Ex	F	F	Ex	S	S	S	S	F	N	F	Ex	S	S	N	Ex	S	S	S	S
Konkan ..	S	F	Ex	S	S	F	S	S	S	F	S	N	F	S	S	F	Ex	S	S	S	S	S
Bombay, Deccan ..	S	S	F	S	S	S	S	S	S	S	S	S	S	Ex	S	S	S	S	N	S	S	S
Sind ..	S	S	S	S	S	S	S	S	S	S	S	S	S	Ex	S	S	S	S	N	S	S	S
Bengal ..	Ex	Ex	Ex	F	Ex	Ex	N	N	F	Ex	Ex	N	Ex	F	N	Ex	S	Ex	S	S	S	S
Assam ..	Ex	N	N	F	N	N	Ex	Ex	F	Ex	N	Ex	Ex	N	N	Ex	F	N	S	S	F	N
Bihar and Orissa—																						
Orissa ..	Ex	Ex	Ex	F	F	S	S	S	N	F	F	Ex	F	F	Ex	S	S	S	S	S	S	S
Chota Nagpur ..	Ex	Ex	Ex	N	N	Ex	S	S	F	F	F	N	Ex	N	Ex	F	S	S	S	S	S	F
Bihar ..	Ex	F	Ex	S	Ex	S	S	S	S	N	Ex	N	Ex	F	Ex	Ex	S	S	S	S	S	S
United Provinces—																						
East ..	Ex	Ex	Ex	S	N	S	S	S	S	N	F	N	N	F	Ex	N	S	S	S	S	S	S
West ..	Ex	N	S	S	N	S	S	S	S	N	S	Ex	Ex	F	Ex	S	S	S	S	S	S	S
Punjab—																						
East and North ..	Ex	S	S	S	S	S	S	S	S	S	F	Ex	Ex	S	S	S	F	F	S	N	S	S
South-West ..	S	S	S	S	S	Ex	S	S	S	S	S	S	Ex	F	S	S	F	F	Ex	S	S	S
North-West Frontier Province ..	N	Ex	Ex	S	S	Ex	S	S	S	S	S	S	S	Ex	Ex	S	S	S	Ex	S	S	S
Central Provinces—																						
Berar ..	S	F	S	Ex	N	N	S	S	F	N	S	N	F	S	S	F	S	S	S	S	S	S
West ..	Ex	N	N	N	N	S	S	S	Ex	Ex	Ex	N	Ex	N	Ex	S	S	S	S	S	S	S
East ..	F	Ex	Ex	N	N	S	S	S	Ex	Ex	Ex	N	F	Ex	N	F	S	S	S	S	S	S

Note.—The thinner and more italic the Statement, the scantier the monsoon. On the other hand, the thicker the black type in the Statement, the more abundant the monsoon.

The following table shows the condition of weekly rainfall during the monsoon period from June to October 1918.
(Abbreviations—S = Scanty, F = Fair, N = Normal, Ex = Excess.)

Province and Sub-division.	JUNE		JULY				AUGUST			SEPTEMBER			OCTOBER						
	week ending		week ending				week ending			week ending			week ending						
	11th	18th 25th	2nd	9th	16th 23rd	30th	6th	13th	20th	27th	3rd	10th	17th	24th	1st	8th	15th	22nd	29th
Central India	S	N	N	Ex	S	S	S	S	S	Ex	S	N	N	S	S	S	S	S	S
West	Ex	F	S	S	N	S	S	S	S	F	Ex	F	S	S	S	S	S	S	S
East
Rajputana
West	S	S	S	F	S	S	S	S	S	Ex	F	Ex	S	S	S	S	S	S	S
East	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex
Madras—
Malabar
South-East
Deccan
Coast North
Burma—
Lower
Upper
Bay Islands
Hyderabad—
North
South
Mysore
Kashmir
Baluchistan

Note.—The thinner and more italic the Statement, the scantier the monsoon. On the other hand, the thicker the black type in the Statement, the more abundant the monsoon.

India has been the home of the cotton trade from the earliest times. Its cotton, known as white wool, was well known to the ancients and its cloth was familiar to the West in the days of the overland route. The name Calico comes from the fine woven goods of Calicut, and the products of the Dacca handlooms are still remarkable as the finest muslins human skill can produce.

Indian Cotton.

The exports of Indian cotton began to assume importance with the opening of the sea route. They received an immense stimulus during the American Civil War, when the close blockade of the Confederate ports produced a cotton famine in Lancashire, and threw the English spinners back on India for their supply of raw material. When the war broke out the shipments of Indian cotton were 528,000 bales, but during the last year of the war they averaged 978,000 bales. Most of this cotton was sold at an enormously inflated price, and induced a flow of wealth into Bombay, the great centre of the trade, for which there was no outlet. The consequence was an unprece-

dent outburst of speculation known as the "Share Mania," and when the surrender of Lee re-opened the Southern Ports widespread ruin followed. It is estimated that the surplus wealth brought into the country by the American Civil War aggregated £ 92 millions. Since then the cultivation of Indian cotton, although interrupted by famine, has steadily increased. For the last season for which returns are available, 1918-19, the total area in all the territories reported on was computed at 20,497,000 acres which is 46,91,000 acres or nearly 19 per cent. below the revised figures of last year. The total estimated outturn was 36,71,000 bales of 400 lbs. which is 8 per cent. below the revised yield of last year. To this figure may be added some 1,000 bales estimated as the production in Native States in Bihar and Orissa which make no return.

Bombay, the Central Provinces and Hyderabad are the chief producing centres. The following table gives the rough distribution of the outturn. The figures are the estimated figures for the past season, and are not exact, but they indicate the distribution of the crop :—

Provinces and States.	1918-19 (Provisional estimates.)	
	Area (acres).	Yield (bales.)
Bombay (including Indian States)	5,036,000	573,000
Central Provinces and Berar	4,211,000	789,000
Madras (including Indian States)	3,118,000	633,000
Punjab (including Indian States)	1,541,000	493,000
United Provinces (including Indian States)	863,000	175,000
Sind (including Indian States)	299,000	108,000
Burma	347,000	78,000
Bengal (including Indian States)	73,600	32,000
Bihar and Orissa (a)	79,000	17,000
North-West Frontier Province	39,000	10,000
Assam	33,000	12,000
Ajmer-Merwara	30,000	14,000
Hyderabad	2,406,000	350,000
Central India	1,233,000	216,000
Baroda	815,000	35,000
Rajputana	250,000	55,000
Mysore	124,000	31,000
Total	20,497,000	3,671,000

The distribution of the export trade is indicated in the appended table.

Exports of Cotton.—A portion of the Indian crops of the season 1917-18 and a portion of the crop of the season 1918-19 came into statistical consideration in the exports during the year 1918-19. The exports amounted to 3½ million cwt. valued at Rs. 31 crores against 7½ million cwt. valued at Rs. 42½ crores in 1917-18. This represents 35·81 per cent. of the total value of raw materials exported from India and 12·94 per cent. of the total exports. The exports shewed a decrease of nearly 49·65 per cent. in quantity and decrease of 27·36 in value. The average declared value per unit rose from Rs. 58 to 84 or by 44·82 per cent. on the total decrease of Rs. 11½ crores. The distribution of the trade is shown below. The United Kingdom and Japan had larger receipts during the war period as compared with those in the earlier period. The principal purchasers of cotton

other than Japan are in normal years Germany, Belgium, Italy, Austria-Hungary and France.

Exports of Raw Cotton.

	1916-17. Cwts.	1917-18. Cwts.	1918-19. Cwts.
United Kingdom ..	825,198	1,137,455	276,166
Russia ..	27,674	42,611	....
France ..	270,890	160,438	36,435
Spain ..	254,677	12,443	2,450
Italy ..	966,391	553,298	440,788
Indo-China ..	19,372	32,559	36,243
China ..	349,242	115,575	54,046
Japan ..	6,153,531	5,187,705	2,797,491
United States of America ..	14,420	31,530	8,569
Other Countries ..	30,907	34,491	26,813
Total ..	8,912,302	7,308,105	2,670,901

(a) Excluding Indian States for which the yield is roughly estimated at 1,000 bales.

Bombay is the great centre of the cotton trade. The **principal varieties** are Dholleras, Broach, Oomras (from the Berars), Dharwar and Coomptas. Broach is the best cotton grown in Western India. Hinganghat cotton, from the Central Provinces, has a good reputation. Bengals is the name given to the cotton of the Gangetic valley, and generally to the cottons of Northern India. The Madras cottons are known as Westerns, Coconadas, Coimbatores and Tinnevellys. The best of these is Tinnevely. Cambodia cotton has been grown with success in Southern India, but it shows a tendency to revert. The high prices of cotton realised of recent years have given a great impetus to cultivation. Government have also been active in improving the class of cotton produced, by seed selection, hybridization and the importation of exotic cottons. Although these measures have met with a considerable measure of success, they have not proceeded far enough to leaven the

whole outturn, which still consists for the most part of a short-staple early maturing variety, suitable to soils where the rainy season is brief.

Reference has been made to the popularity of the Indian handloom cloths in the earliest days of which we have record. This trade grew so large that it excited alarm in England, and it was killed by a series of enactments, commencing in 1701, prohibiting the use or sale of Indian calicoes in England. The invention of the spinning jenny and the power loom and their development in England converted India from an exporting into an importing country, and made her dependent on the United Kingdom for the bulk of her piece-goods. The first attempt to establish a cotton mill in India was in 1838, but the foundations of the industry were really laid by the opening of the first mill in Bombay in 1856. Thereafter, with occasional set backs from famine, plague and other causes, its progress was rapid.

The following statement shows the quantity (in pounds) of yarn of all counts spun in all India for the twelve months, April to March, in each of the past three years:—

						1916-17.	1917-18.	1918-19.
BRITISH INDIA.								
Bombay	..	..	..	..	..	482,147,956	468,972,125	427,638,345
Madras	..	..	..	..	..	44,187,107	43,092,929	42,787,344
Bengal	..	..	..	..	..	28,568,029	32,881,683	32,507,148
United Provinces	..	..	..	..	..	46,177,251	39,473,169	34,390,651
Ajmer-Merwara	..	..	..	..	..	2,576,103	1,816,864	2,056,504
Punjab	..	..	..	..	..	3,749,852	3,909,431	3,919,719
Delhi	..	..	..	..	..	2,702,886	3,187,993	2,981,057
Central Provinces and Berar	..	..	..	..	..	34,337,717	33,466,316	34,279,946
TOTAL						644,446,901	626,800,510	580,560,714
FOREIGN TERRITORY.								
Native States of Indore, Mysore, Baroda, Nandgaon, Bhavnagar, Hyderabad (b), Wadhwan, Gwalior (Ujjain) and Pondicherry (a) ..						36,660,330	33,775,105	34,470,750
GRAND TOTAL						681,107,231	660,575,615	615,040,464

(a) Including the production of one mill only.

(b) One mill in Hyderabad did not work for a month.

The spinning of yarn is in a large degree centred in Bombay, the mills of that province producing nearly 74 per cent. of the quantity produced in British India. The United Provinces of Agra and Oudh and Madras produced about 6 per cent. and 7 per cent. respectively, while Bengal and the Central Provinces produced 5·1 and 5·2 per cent. Elsewhere the production is as yet very limited.

BOMBAY SPINNERS.

Here is a detailed statement of the quantity (in pounds) and the counts, or numbers, of yarn spun in Bombay island :—

— — — —	1916-17.	1917-18.	1918-19.
Nos. 1 to 10	73,500,246	71,167,206	55,970,012
„ 11—20	198,699,909	186,336,410	151,433,239
„ 21—30	77,591,278	90,915,609	90,604,192
„ 31—40	4,824,359	6,991,059	6,669,429
Above 40	1,225,775	1,846,887	1,446,515
Wastes, &c.	57,928	31,467	66,661
TOTAL ..	355,899,495	357,288,638	306,190,048

YARN AT AHMEDABAD.

The corresponding figures for Ahmedabad are as follows :—

— — — —	1916-17.	1917-18.	1918-19.
Nos. 1—10	1,648,377	974,314	1,481,934
„ 11—20	17,997,730	14,834,912	19,362,183
„ 21—30	45,764,637	36,038,418	43,318,133
„ 31—40	14,178,018	12,008,343	8,288,765
Above 40	675,588	1,009,719	772,643
Wastes, &c.	4,399	.....	....
TOTAL ..	80,269,049	64,865,706	73,223,658

YARN SPUN THROUGHOUT INDIA.

The grand totals of the quantities in various counts of yarn spun in the whole of India, including Native States, are given in the following table :—

— — — —	1916-17.	1917-18.	1918-19.
Nos. 1—10	110,682,164	100,452,492	87,319,699
„ 11—20	369,932,533	346,001,810	314,540,680
„ 21—30	171,487,582	183,667,136	189,204,470
„ 31—40	24,081,681	24,388,708	19,189,215
Above 40	4,577,334	5,842,190	4,555,242
Wastes, &c.	345,937	223,279	231,158
TOTAL ..	681,107,231	660,575,615	615,040,464

In the early days of the textile industry the energies of the millowners were largely concentrated on the production of yarn, both for the China market, and for the handlooms of India. The increasing competition of Japan in the China market, the growth of an indigenous industry in China and the uncertainties introduced by the fluctuations in the China exchanges consequent on variations in the price of silver compelled the millowners to cultivate the Home market. The general tendency of recent years has been to spin

higher counts of yarn, importing American cotton for this purpose to supplement the Indian supply, to erect more looms, and to produce more dyed and bleached goods. This practice has reached a higher development in Bombay than in other parts of India, and the Bombay Presidency produces nearly 87 per cent. of the cloth woven in India. The United Provinces produces 2·4 per cent., the Central Provinces 3·8 per cent. and Madras about 2·5 per cent. Grey and Bleached goods represent nearly 70 per cent. of the whole production.

ANALYSIS OF WOVEN GOODS.

The following brief extract is taken from the statement of the quantity (in pounds and their equivalent in yards) and description of woven goods produced in all India, including Native States :—

	1916-17.	1917-18.	1918-19.
Grey and Bleached piece-goods—			
Pounds	274,851,443	268,772,199	257,839,998
Yards	1,136,170,373	1,141,021,562	1,076,711,011
Coloured piece-goods—			
Pounds	98,351,965	106,751,853	85,601,778
Yards	441,962,416	473,104,896	374,015,149
Grey and coloured goods other than piece-goods—			
Pounds	3,113,286	3,639,423	3,743,704
Dozens	660,384	706,251	721,172
Hosiery—			
Pounds	409,790	349,373	260,968
Dozens	256,576	215,221	148,696
Miscellaneous—			
Pounds	959,679	1,638,317	1,826,837
Cotton goods mixed with silk or wool—			
Pounds	42,653	253,004	307,165
Total—			
Pounds	377,728,816	381,404,169	349,580,450
Yards	1,578,132,789	1,614,126,458	1,450,726,160
Dozens	896,960	921,472	869,868

BOMBAY WOVEN GOODS.

The output of woven goods during the three years in the Bombay Presidency was as follows. (The weight in pounds represents the weight of all woven goods; the measure in yards represents the equivalent of the weight of the grey and coloured piece-goods.)

	1916-17.	1917-18.	1918-19.
Pounds	305,178,667	309,110,604	275,801,034
Yards	1,318,810,176	1,361,080,711	1,197,421,958
Dozens	731,539	761,503	746,471

The grand totals for all India are as follows :—

	1916-17.	1917-18.	1918-19.
Pounds	377,728,816	381,404,169	349,580,450
Yards	1,578,132,789	1,614,126,458	1,450,726,160
Dozens	896,960	921,472	869,868

Progress of the Mill Industry.

The following statement shows the progress of the Mill Industry in the whole of India.

Year ending 30th June	Number of Mills.	Number of Spindles.	Number of Looms.	Average No. of Hands Employed Daily.	Approximate Quantity of Cotton Consumed.	
					Cwts.	Bales of 392 lbs.
1898	185	4,259,720	38,013	148,964	5,184,648	1,481,328
1899	188	4,728,333	39,069	162,108	5,863,165	1,675,190
1900	192	4,945,783	40,124	161,189	5,086,732	1,453,352
1901	193	5,006,936	41,180	172,883	4,731,090	1,351,740
1902	192	5,006,965	42,584	181,031	6,177,633	1,765,038
1903	192	5,043,297	44,092	181,399	6,087,690	1,739,340
1904	191	5,118,121	45,337	184,779	6,106,681	1,744,766
1905	197	5,163,486	50,139	195,277	6,577,354	1,879,244
1906	217	5,279,595	52,668	208,616	7,082,306	2,023,510
1907	224	5,333,275	58,436	205,696	6,930,595	1,980,170
1908	241	5,756,020	67,920	221,195	6,970,250	1,991,500
1909	259	6,053,231	76,898	236,924	7,381,500	2,109,000
1910	263	6,195,671	82,725	233,624	6,772,535	1,935,010
1911	263	6,357,460	85,352	230,649	6,670,531	1,905,866
1912	268	6,463,929	88,951	243,637	7,175,357	2,050,102
1913	272	6,596,862	94,136	253,786	7,336,056	2,096,016
1914*	271	6,778,895	104,179	260,276	7,500,961	2,143,126
1915*	272	6,848,744	108,009	265,346	7,359,212	2,102,632
1916*	266	6,839,877	110,268	274,361	7,692,013	2,197,718
1917*	263	6,738,697	114,621	276,771	7,693,574	2,198,164
1918*	262	6,653,871	116,484	282,227	7,299,873	2,085,678

* Year ending 31st August.

Earnings of Labour.

In 1917 wages in the Bombay cotton industry were increased by ten per cent. to meet the higher cost of food. They were raised a further ten per cent. in 1919. We give the average wages, it being understood that the Bombay rate is at least ten per cent. higher.

AVERAGE WAGES.

Cotton.	Rate per	1915.	1916.	1917.
		Rs. a. p.	Rs. a. p.	Rs. a. p.
Card Room	Month	12 13 0	12 13 7	13 2 9
Ring-throstle Room	„	12 6 8	12 6 8	12 12 0
Reeling Room	„	9 8 0	9 8 0	10 8 0
Bundling Room	„	16 0 0	16 0 0	17 0 0
Sizing Department	„	23 6 10	23 6 10	23 6 10
Weaving Department	„	33 8 0	36 0 0	36 0 0

Statement of the amount in rupees of Excise duty realised from goods woven in the Cotton Mills in British India; under the Cotton Duties Act, II of 1896; also the amount of equivalent duty levied in the Native States; in each year from 1898-99 to 1918-19.

	Bombay.	Madras.	Bengal.	United Provinces of Agra and Oudh (also Ajmer-Merwara).	Punjab and Delhi.	Central Provinces and Berar.
1898-99	11,26,390	89,130	900	61,000	12,730	84,969
1899-1900	10,95,236	88,678	2,523	54,818	10,448	88,109
1900-01	10,28,542	41,827	5,038	50,116	5,806	84,978
1901-02	15,26,103	54,139	5,863	69,284	4,379	1,10,140
1902-03	15,84,121	67,813	6,605	74,023	3,031	1,50,620
1903-04	17,64,527	62,350	10,908	89,189	1,104	1,56,371
1904-05	20,43,832	65,379	11,929	96,710	2,607	1,61,368
1905-06	22,78,425	1,10,943	11,165	1,32,364	5,144	1,68,743
1906-07	24,36,265	1,32,693	23,709	1,35,884	7,464	1,64,680
1907-08	28,82,296	1,35,131	31,556	1,66,044	8,746	1,75,944
1908-09	29,51,859	1,42,295	53,351	1,88,345	9,509	1,98,419
1909-10	33,88,658	1,45,333	55,822	1,92,552	6,611	2,17,217
1910-11	36,78,555	1,48,136	56,359	1,82,083	7,300	2,07,818
1911-12	42,17,878	1,65,048	48,631	1,84,653	10,862	2,52,415
1912-13	48,27,698	2,06,862	81,709	2,11,847	17,971	2,71,882
1913-14	45,68,188	2,13,166	78,951	2,55,467	22,353	3,00,919
1914-15	42,31,546	1,83,880	53,046	2,07,454	10,068	2,54,927
1915-16	42,25,608	2,11,456	41,704	2,01,012	9,291	2,36,497
1916-17	35,38,236	2,87,043	70,529	2,47,991	24,183	2,93,466
1917-18	64,13,806	4,09,467	1,18,336	2,91,052	38,628	3,49,490
1818-19	121,20,342	7,48,546	2,10,582	5,07,555	56,612	6,75,343

	Total British India.		Native States.	Grand Total.	
	Gross duty.	Net duty.	Gross duty.	Gross duty.	Net duty.
1898-99	13,75,119	13,53,120	52,186	14,27,305	14,05,306
1899-1900	13,39,812	13,09,514	40,937	13,80,749	13,50,451
1900-01	12,16,367	11,62,947	48,449	12,64,756	12,11,396
1901-02	17,69,908	17,16,836	61,171	18,31,079	17,77,965
1902-03	18,66,213	18,25,469	65,541	19,31,754	18,91,010
1903-04	20,77,449	20,36,104	59,061	21,36,510	20,95,149
1904-05	23,81,825	23,33,636	67,320	24,49,145	24,06,976
1905-06	27,06,784	26,71,061	83,455	27,90,239	27,54,516
1906-07	29,00,957	28,64,202	81,976	29,82,671	29,46,152
1907-08	33,99,717	33,55,946	97,499	34,97,216	34,53,443
1908-09	35,43,778	34,98,480	1,14,498	36,58,276	36,12,977
1909-10	40,06,193	39,61,020	1,37,699	41,43,892	40,98,719
1910-11	42,26,575	1,75,878	1,75,878	44,56,129	44,01,707
1911-12	48,79,478	48,04,492	1,82,479	50,61,957	49,86,971
1912-13	56,17,969	55,76,567	2,21,178	58,39,147	57,97,745
1913-14	54,39,043	53,95,014	2,38,393	56,77,436	56,33,407
1914-15	49,40,931	49,32,185	2,33,160	51,74,091	51,65,345
1915-16	49,25,571	48,40,107	1,90,275	51,15,846	50,30,382
1916-17	44,61,448	43,80,425	2,47,301	47,08,749	46,27,726
1917-18	76,20,779	75,45,252	3,84,780	80,05,559	79,37,032
1918-19	1,43,18,980	1,37,69,993	5,07,891	1,48,26,871	1,42,77,884

The Jute Industry.

Considering its present dimensions, the jute industry of Bengal is of very recent origin. The first jute mill in Bengal was started at Rishra in 1855, and the first power-loom was introduced in 1859. The original outturn was 8 tons per day. In 1909 it had grown to 2,500 tons per day, it is now 3,000 tons per day, and it shows every indication of growing and expanding year by year. Another interesting thing about the jute industry of Bengal is that, although it is practically a monopoly of Scotsmen from Dundee, the industry itself owes its inception to an Englishman. The founder of the industry was George Acland, an Englishman, who began life as a midshipman in the navy, and was for some years in the East India Marine Service. He quitted this service while still a young man, and engaged in commercial pursuits in Ceylon, where he was successful. Later on he turned his attention to Bengal, and arriving in Calcutta about 1853 he got into touch with the management of the paper works, then at Serampore, where experiments were being tried with country grasses and fibre plants to improve the quality or cheapen the manufacture of paper. This seems to have suggested to Acland the manufacture of rhea, and in 1854 he proceeded to England, with a view to obtaining machinery and capital in order to manufacture goods from that material. During this trip he visited Dundee, and while there Mr. John Kerr, of Douglas Foundry, suggested to him the importing of machinery to Bengal "where the jute comes from and spin it there." This suggestion bore fruit, for shortly afterwards Acland placed orders with Kerr for a few systems of preparing and spinning machinery, and returned to India the same year accompanied by his two sons and a few Dundee mechanics who were to assist him in erecting and operating the first jute mill in Bengal. This, as has been stated, was at Rishra, the site of the present Wellington mills, near Serampore, and here, in 1855, the first machine spun jute yarns were made. As not infrequently happens the pioneer got very little out of his venture. After several ups and downs the Acland interest in the Rishra mill ceased in 1867, and the company which Acland had formed in 1854 was wound up in 1868.

Power-loom.—The pioneer's example was followed by Mr. George Henderson of that ilk and firm, and in 1859 the Borneo Jute Co. was launched under his auspices. To this company is due the credit of introducing the power-loom for jute cloth. Unhampered by the financial difficulties which had burdened the Aclands, the Borneo Jute Co. made rapid progress, doubling their works in 1864, and clearing their capital twice over. In 1872 the mills were turned into a limited liability company, the present "Barnagore Jute Manufacturing Co., Ltd." Four other mills followed in succession—Gouripore, Serajunge, and India Jute Mills.

"From 1868 to 1873," writes Mr. David Wallace in "The Romance of Jute," "the five mills excepting the Rishra mill simply

coined money and brought the total of their looms up to 1,250." To illustrate the prosperity of the industry at this period we may take the dividends paid by the Barnagore Company. On the working of their first half year, a 15 per cent. interim dividend was declared, which seemed to justify the enormous capital at which the company was taken over from the Borneo Company, and shares touched 68 per cent. premium. The dividend for the first year, ending August 1873, was 25 per cent., for 1874, 20 per cent., and for 1875 10 per cent. Then came a change. The investing public had forgotten the effect of the Port Canning bubble, and the condition of the jute industry in 1872-73 seeming to offer a better return than coal or tea, both of which had just enjoyed a boom, it was only necessary to issue a prospectus of a jute mill to have all the shares snapped up in the course of an afternoon.

In 1872-73 three new companies were floated locally—the Fort Gloster, Budge Budge and Sibpore, and two Home companies, the Champdany and Samnugger, all of which commenced operations in 1874. In 1874-5 eight other mills were launched—the Howrah, Oriental (now Union), Asiatic (now Soorah), Clive, Bengal Pressing and Manufacturing Co. (now the Belliaghata-Barnagore branch mill), Rustomjee (now the Central), Ganges (registered in England), and Hastings, owned by Messrs. Birkmyre Bros., of Greenock fame—in all thirteen new companies, coming on all of a heap and swelling the total looms from 1,250 up to 3,500. This was too much of a strain for the new industry, and for the next ten years all the mills had a severe struggle. The older ones all survived the ordeal, but four of the new concerns—the Oriental, the Asiatic, the Bengal Pressing and Manufacturing Co. and the Rustomjee—became moribund, to appear again later on under new names and management. Fort Gloster also suffered badly.

Between 1875 and 1882 only one new mill was put up. This was Kamarahatty, promoted by Messrs. Jardine, Skinner & Co., which came into being in 1877, as the result of Dr. Barry's visit to Calcutta in 1876, when he transferred the agency of the Gouripore Co. from Messrs. Jardine, Skinner & Co. to his own firm. This mill, together with additions made by some of the other mills, brought the total looms up to 5,150 in 1882. By the end of 1885 the total was further augmented by the Hooghly, Titaghur, Victoria and Kanknarrah mills, bringing the number of looms at work up to 6,700. From this period on to 1894 no new mills came into existence except the Calcutta Twist Mill, with 2,460 spindles, since merged into the Wellington branch of the Champdany Co. Between 1896 and 1900 the following new mills were started:—the Gordon Twist Mill with 1,800 spindles (now acquired by Anglo-India), Khardah, Gondolpara (French owned), Alliance, Arathoon, Anglo-India, Standard, National, Delta (which absorbed the Serajunge), and the Kinnison. A full of four years witnessed large extensions to the existing mills, after which came the following series of new

mills, besides further heavy extensions—Dalhousie, Alexandra, Naihati, Lawrence, Reliance, Belvedere, Auckland, Kelvin and Northbrook.

Progress of the Industry.

THE record of the jute industry may well be said to be one of uninterrupted progress. The following statement shews **quinquennial aver-**

ages from the earliest year for which complete information is available with actuals for the last three years; and the figures in brackets represent the variations for each period, taking the average of the quinquennium from 1879-80 to 1883-84 as 100. It will be seen that the number of looms and spindles in operation and that of persons employed have increased to a very much larger extent than either the number of mills at work or the amount of capital employed:—

		Number of mills at work.	Authorised Capital (in lakhs of Rs.)	Number (in thousands) of		
				Persons employed.	Looms.	Spindles.
1879-80 to 1883-84	..	21 (100)	270·7 (100)	38·8 (100)	5·5 (100)	88 (100)
1884-85 to 1888-89	..	24 (114)	341·6 (126)	52·7 (136)	7 (127)	138·4 (157)
1889-90 to 1893-94	..	26 (124)	402·6 (149)	64·3 (166)	8·3 (151)	172·6 (196)
1894-95 to 1898-99	..	31 (148)	522·1 (193)	86·7 (223)	11·7 (213)	244·8 (278)
1899-1900 to 1903-04	..	36 (171)	680 (251)	114·2 (294)	16·2 (295)	334·6 (380)
1904-05 to 1908-09	..	46 (219)	960 (355)	165 (425)	24·8 (451)	510·5 (580)
1909-10 to 1913-14	..	60 (286)	1,209 (443)	208·4 (537)	33·5 (609)	691·8 (786)
1914-15	..	70 (333)	1,394·3 (515)	238·3 (614)	38·4 (698)	795·5 (904)
1915-16	..	70 (333)	1,322·6 (488)	254·1 (655)	39·9 (725)	812·4 (923)
1916-17	..	74 (352)	1,395·5 (516)	262·6 (677)	39·7 (722)	824·3 (937)
1917-18	..	76 (362)	1,428·5 (528)	266· (686)	40·6 (738)	834 (948)

The production of the mills has increased to a still greater extent. The following figures show the exports of jute manufactures and the declared values for the same periods:—

			Jute manufactures.		Value in lakhs of Rs.
			Gunny bags in millions of number.	Gunny cloths in millions of yards.	
1879-80 to 1883-84	..	..	54·9 (100)	4·4 (100)	124·9 (100)
1884-85 to 1888-89	..	..	77 (140)	15·4 (350)	162·9 (130)
1889-90 to 1893-94	..	..	111·5 (203)	41 (932)	289·3 (232)
1894-95 to 1898-99	..	..	171·2 (312)	182 (4,136)	518 (415)
1899-1900 to 1903-04	..	..	206·5 (376)	427·2 (9,709)	826·5 (662)
1904-05 to 1908-09	..	..	257·8 (469)	698 (15,864)	1,442·7 (1,154)
1909-10 to 1913-14	..	..	339·1 (618)	970 (2,045)	2,024·8 (1,621)
1914-15	..	..	397·6 (724)	1,057·3 (24,030)	2,582 (2,067)
1915-16	..	..	794·1 (1,447)	1,192·3 (27,098)	3,797·8 (3,041)
1916-17	..	..	805·1 (1,466)	1,230·9 (27,975)	4,167·2 (3,336)
1917-18	..	..	758·4 (1,381)	1,196·8 (27,200)	4,284·3 (3,430)

Up to the last quinquennium the exports of raw jute were marked by increases from year to year though the improvement was not so rapid as in the case of manufactures. A slight decrease in the exports occurred in 1909-10 as compared with the figures for the preceding quinquennial period and a further decline in 1910-11, but a marked recovery was made in 1911-12 which was accentuated in 1912-13:—

Jute, raw, in millions of cwt.	
1879-80 to 1883-84	7·5 (100)
1884-85 to 1888-89	8·9 (119)
1889-90 to 1893-94	10 (133)
1894-95 to 1898-99	12·3 (164)
1899-1900 to 1903-04	12·7 (169)
1904-05 to 1908-09	15·09 (201)
1909-10	14·6 (195)
1910-11	12·7 (169)
1911-12	16·2 (216)
1912-13	17·5 (233)
1913-14	15·4 (205)
1914-15	10·1 (135)
1915-16	12 (160)
1916-17	10·8 (144)
1917-18	5·6 (74)

The total quantity of jute manufactures exported by sea from Calcutta during the official year ending 31st March 1918 was 716,000 tons as against 784,800 tons in the preceding year 1916-17 and 603,500 tons in the pre-war year 1913-14. In 1917-18 gunny bags contributed 404,000 tons and gunnycloth 307,000 tons as against 461,800 tons and 317,800 tons, respectively in the preceding year (1916-17) and 324,300 tons and 275,100 tons respectively in the pre-war year (1913-14). The total value of jute manufactures exported during the year 1917-18 was £28 millions as against £27 millions in the preceding year and £19 millions in the pre-war year (1913-14).

The price of raw jute reached a very high point in 1906-07, the rate being Rs. 65 per bale; in 1907-08 it dropped to Rs. 42 per bale, and the fall was accentuated in 1908-09 and 1909-10, the price having declined to 36·4 and Rs. 31

per bale respectively. In 1910-11 the price rose again to Rs. 41-8-0, to Rs. 51-4-0 in 1911-12 and further to Rs. 76-12-0 in 1913-14. The following are the quinquennial average prices per bale (400 pounds) of ordinary jute calculated from the prices current published by the Bengal Chamber of Commerce:

Price of jute, ordinary, per bale of 400 lbs.	
Rs. a. p.	
1879-80 to 1883-84	23 8 0 (100)
1884-85 to 1888-89	23 3 2 (99)
1889-90 to 1893-94	32 6 5 (138)
1894-95 to 1898-99	30 12 0 (131)
1899-1900 to 1903-04	32 1 7 (137)
1904-05 to 1908-09	44 13 6 (191)
1909-10	31 0 0 (132)
1910-11	41 8 0 (177)
1911-12	51 4 0 (218)
1912-13	54 12 0 (233)
1913-14	76 12 0 (327)
1914-15	54 8 0 (232)
1915-16	48 4 0 (205)
1916-17	50 12 0 (216)
1917-18	38 8 0 (164)

The average prices of gunny cloth have been as follows:—

Price of Hessian cloth 10½ oz. 40" per 100 yds.	
Rs. a. p.	
1879-80 to 1883-84	10 7 11 (100)
1884-85 to 1888-89	8 0 7 (77)
1889-90 to 1893-94	10 6 6 (99)
1894-95 to 1898-99	9 11 8 (93)
1899-1900 to 1903-04	10 2 10 (97)
1904-05 to 1908-09	11 14 1 (112)
1909-10	9 3 6 (88)
1910-11	9 5 6 (89)
1911-12	11 14 0 (113)
1912-13	16 6 0 (156)
1913-14	17 0 0 (162)
1914-15	12 4 0 (117)
1915-16	20 10 0 (197)
1916-17	17 6 0 (166)
1917-18	33 8 0 (319)

The 1919 crop.—The final figures of outturn for the three provinces work out as follows:—

PROVINCE.	BALES.		Difference.
	1919.	1918.	
Bengal (including Cooch Behar)	7,637,630	*6,392,137	+1,245,493
Bihar and Orissa (including Nepal)	554,070	*398,742	+155,328
Assam	294,534	*228,209	+66,325
Total	8,486,234	7,019,088	+1,467,146

PROVINCE.	AREA IN ACRES.		Difference.
	1919.	1918.	
Bengal (including Cooch Behar)	2,498,145	2,249,026	+249,119
Bihar and Orissa	* 203,430	149,256	+54,174
Assam	* 120,000	102,100	+17,900
Total	2,821,575	2,500,382	+321,193

* Revised.

The Indian Jute Mills Association now one of the most important, if not the most important, of the bodies affiliated to the Bengal Chamber of Commerce, was started under the following circumstances:—In 1886 the existing mills, finding that, in spite of the constant opening up of new markets, working results were not favourable, came to an agreement, with the late S. E. J. Clarke, Secretary to the Chamber of Commerce, as trustee, to work short time. The only mills which stood out of this arrangement were the Hooghly and Serajunge. The first agreement, for six months dating from 15th February 1886, was subsequently renewed at intervals without a break for five years up to February 15, 1891. The state of the market at the time of the renewals dictated the extent of the short time, which varied throughout the five years between 4 days a week, 9 days a fortnight and 5 days a week. Besides short time, 10 per cent. of the sacking looms were shut down for a short period in 1890. An important feature of this agreement was a mutual undertaking by the parties not to increase their spinning power during the currency of the agreement, only a few exceptions being made in the case of a few incomplete new mills.

The officials of the Association are:—

Chairman: The Hon. Mr. A. R. Murray, C.B.E.

Members of Committee: The Hon. Mr. R. V. Mansell, O.B.E., Mr. P. W. Newson, Mr. J. Bell Robertson and Mr. G. F. Rose.

Working days.—With the introduction of the electric light into the mills in 1896, the working day was increased to 15 hours, Saturdays included, which involved an additional amount of cleaning and repairing work on Sundays. In order to minimise this Sunday work and give them a free Sunday, an agitation was got up in 1897 by the Mill European assistants to have the engines stopped at 2 or 3 p.m. on Saturdays. The local Government took the matter up, but their action went no further than applying moral suasion, backed by a somewhat half-hearted threat. The Mill Association held meetings to consider the question and the members were practically agreed as to the utility of early closing on Saturdays, but, *more suo*, could not trust themselves to carry it out without legislation. Unfortunately the Government of India refused to sanction the passing of a Resolution by the provincial Government under the Factory Act and the matter was dropped. Only a year or two ago the Jute Mills Association in despair brought out an American business expert, Mr. J. H. Parks, to advise them on the possibility of forming a jute trust with a view to exercising some control over the production and price of jute. Mr. Parks came, and wrote a report which the Association promptly pigeon-holed because the slump was over and the demand was so prodigious that there was no need to worry about the price of jute.

An Association, styled the **Calcutta Jute Dealers Association**, has lately been formed in Calcutta to promote and to guard the common interests of its members as dealers in jute for local consumption. The members are balers and brokers of jute for sale to the jute

mills in and around Calcutta. Committee:—Mr. Geo. Morgan, *Chairman*, Members:—Messrs. G. S. Alexander, D. P. How, P. E. Suttie, M. Morrison, and J. More.

Effects of the War.—The official review of the Trade of India in 1916-17 says:—The value of the exports of raw jute increased in 1916-17 by nearly Rs. 65 lakhs to Rs. 1,629 lakhs. The quantity exported, however, was less than in the preceding year. The estimated yield of the crop was 12 per cent. above that of the previous year, *viz.*, 1,490,000 tons or 8,340,000 bales. Owing to the lack of tonnage and other abnormal circumstances brought about by the war, the quantity exported was 10 per cent. below that of the previous year. Of the consumers the United Kingdom and Italy took less, while the United States, France (mainly *via* Dunkirk), Russia (*via* Vladivostok) and Brazil took greater quantities. There were, of course, no exports to enemy countries which took more than 27 per cent. in the five years ending 1913-14, the pre-war year. The increase in the value accompanied by a decrease in the volume of exports was due to the very high range of prices during the months of September, October, November and December. Towards the close of the year under review prices steadily declined, and have since gone still lower.

Jute Manufactures.—The value of the exports now approximates to Rs. 42 crores. In spite of the war with its attendant difficulties of freight and finance, the exports of gunny cloth showed an increase of Rs. 241 lakhs of which Rs. 163 lakhs were due to higher prices and Rs. 78 lakhs to an increase in the volume of exports. There were also an increase of Rs. 118 lakhs in the value of gunny bags exported. The number of bags shipped increased while the weight decreased, sand bags for war purposes being lighter than the ordinary bags for transporting grain. Exports to Australia in 1916-17 were a record. The United Kingdom with Australia took more than half of the number of bags exported while the United States took more than half of the quantity of cloth exported.

There were 74 mills at work throughout the year with 39,697 looms and 824,315 spindles. The number of persons employed was 262,552. There were no difficulties as regards the supply of labour. Four new mills came into existence. It is improbable that these, with one exception, can begin manufacturing to any extent until after the war.

Hemp and Jute Substitutes.

Experiments have been made during the last few years by the Agricultural Department of the Government of India with the **Dekan hemp** plant (*Hibiscus cannabinus*), which yields a fibre very similar to jute. As a result, a new variety of the plant, known as Type 3, has been obtained, which it is now proposed to introduce into several parts of India, and, as a beginning, the variety is to be grown on a number of estates in Bihar. A sample of the fibre prepared from this variety by the usual methods of retting was 10 ft. to 12 ft. long, of an exceptionally light colour, well cleaned, and of good strength. It was valued at £18 per ton with Bimlipatam jute at £12 10s., and Bengal first mark jute at

£17 per ton. Deccan hemp has been grown fairly extensively in Bombay, the Central Provinces, and Madras, where it is used for ropes and cordage and also for the manufacture of a coarse sackcloth. A valuable feature of the plant is its suitability for cultivation in such parts of India as are not suitable for jute.

Prior to the war, the United Kingdom's requirements of hemp were mainly supplied by the following countries in order of importance:—the Philippine Islands, New Zealand, India, Russia, Italy and Germany. The opinion appears to be held that the effect of the war will be to cause very considerable changes in the character of the fibre market. There will probably be labour difficulties, it is thought, in the preparation of the hemp crops of Russia and Hungary, and it is not unlikely that the world will look to countries such as India for the supply of fibres which may be used as substitutes for the European varieties of hemp. There can be no doubt that one of the early effects of the war was to firm up hemp prices. As far as Indian hemp is concerned, values were persistently depreciated during the first six months of 1914 owing to large stocks held; but the closure of the Russian hemp market on the outbreak of war resulted in a marked improvement in values, and there was a keen demand and a considerable rise in price.

Profits of Bengal Jute Mills.

An estimate of the profits of the Bengal jute mills during the first half of 1918 has been made in the Department of Statistics from a detailed analysis of the published accounts of 36 jute mill companies (including one sterling company registered in the United Kingdom) whose accounts were closed during the half year. It

is interesting to note how sterling companies are being transformed into rupee companies. From 1914 to 1916 there were 9 sterling companies (including one French company working at Chandernagore); three of these were transformed in 1917 into rupee companies under the Indian Act. There are thus 6 sterling companies now working in Bengal of which one is, as stated above, dealt with in the statistics for the first half of 1918. The other five companies which close their accounts in the second half of the year will be dealt with in the next statement, that is, for the latter half of 1918. The compilation of the data has been made uniform as far as practicable, and the 36 mills have been regarded as one mill. In all cases the profits have been shown after deduction of Indian income tax and super tax, because the amount of tax paid was not always shown separately in the Balance Sheets but lumped with other items of expenditure under the head of "Manufacturing and other expenses." In the case of the sterling company the British income tax and the British excess profits duty have been deducted as well as the Indian income tax and super tax. The profits are shown before and after deduction of interest on debentures. Some companies have paid off their debentures, others are in the process of doing so, while others again have created debenture redemption funds out of surplus profits. Debenture interest is not shown separately in all the published accounts but the amounts have been ascertained as correctly as possible. No allowance has been made for depreciation as no uniform practice of writing off depreciation is followed by jute mills in Bengal. Their suits are summarised below as compared with the pre-war profits and the profits since the outbreak of war.

YEAR.		Number of Cos. whose accounts were closed during each half year.	Profits before deduction of interest on debentures.	Interest on debentures.	Net profits (subject to depreciation).	Ratio of net profits (Col. 5) to total paid up capital.
1		2	3	4	5	6
			Rs. (1000)	Rs. (1000)	Rs. (1000)	
1915..	First half ..	31	1,70,45	10,07	1,60,38	58
	Second half ..	38	5,52,60	13,74	5,38,86	
1916..	First half ..	32	3,94,99	19,25	3,84,74	75
	Second half ..	39	5,51,39	12,88	5,38,51	
1917..	First half ..	34	2,66,78	9,59	2,57,19	49
	Second half ..	40	4,00,35	11,74	3,88,61	
1918..	First half (pre-war).	36	7,28,00	9,50	7,18,50	73*
	Second half ..			Dis continued.		
1919..	First half ..			Dis continued.		

* This ratio has been calculated on the profits of only the first half of 1918.

It will be seen from the above statement that the profits during the first half of 1918 have surpassed all previous records.

THE WOOL INDUSTRY.

Wool exported from India consists not only of wool grown in India itself, but of imports from foreign sources, these latter coming into India both by land and by sea. Imports by sea come chiefly from Persia, but a certain quantity from Persia also comes by land, while the main imports are from Afghanistan, Central Asia, Tibet and Nepal. Quetta, Shikarpur, Amritsar and Multan are the main collecting centres for wool received by land from Afghanistan and Persia, whence it is almost invariably railed to Karachi for subsequent export overseas.

Imports and Exports.—The quantity of raw wool imported across the frontier in 1918-19 was nearly 28 million lbs. The imports of Tibetan wool were 9 million lbs. or 4 per cent. below the preceding year, but 66 per cent. above the pre-war average. The imports from Afghanistan (16 million lbs.) increased by 7 per cent. as compared with the previous year and 34 per cent. as compared with the pre-war average. Exports of raw wool from India amounted in 1918-19 to 47,376,000 lbs. and exports of carpets to 944,000 lbs., the whole being valued at Rs. 5,56,80,000.

Production in India.—The production of wool in India is estimated at 60 million lbs. the estimate being arrived at from the available figures of the number of sheep in the country and their estimated yield per fleece, the average quantity of wool yielded per sheep per annum being taken at only 2 lbs.

All Indian wools are classed in the grade of carpet wools, and it is correct to say of perhaps fully half the breeds of sheep found on the plains of India that they yield a kind of hair rather than of wool. They are reared chiefly on account of the mutton, and the fleece has been generally regarded as of subsidiary interest. In many respects, in actual fact, the Indian plains sheep approximate more nearly to the accepted type of the goat rather than of the sheep. Short remarks in his manual on Indian cattle and sheep, particularly with respect to the Madras type, that they "resemble a greyhound with tucked up belly, having some coarseness of form, the feet light, the limbs bony, sides flat and the tail short."

Mill manufacture.—The number of woollen mills at work in British India in 1902 was three, with an authorised capital of Rs. 38,50,000, and employing 23,800 spindles and 624 looms. The number of persons employed

in the industry then was 2,559, and the quantity of woollen goods produced 2,148,000 lbs. At the end of 1917 the number of mills had risen to five, with an authorised capital of Rs. 2,56,50,000 employing 39,608 spindles and 1,155 looms. The weight of goods produced then was 9,744,264 lbs. and the number of persons employed 7,824. With regard to Indian States, there was one mill in Mysore in 1903 with a capital of Rs. 6,00,000, employing 1,430 spindles and 45 looms. The quantity of goods produced was 1,136,000 lbs. and the number of persons employed 297. In 1907 there was still only the one mill working in an Indian State—the authorised capital had been increased to Rs. 15,00,000, the quantity of goods produced to 1,724,087 lbs., and the number of persons employed to 563. Three of the mills manufacture all classes of woollen and worsted goods, the remainder manufacturing blankets only. The existence of these mills in India proved of great service to Government in the meeting of war requirements, and they were all employed to their fullest capacity in supplying army demands for greatcoat cloth, serges, putties, flannels, blankets and hosiery. Their total capacity, however, was not sufficient to meet the full requirements of the army, and consequently their supplies had to be supplemented by large imports from home. The bulk of the wool used by the Indian mills is Indian wool, although it is supplemented to some extent by the importation of merinos and cross-breeds from Australia for the manufacture of the finer classes of goods. Their market for manufactured goods is almost entirely in India itself. A number of new woollen mills was projected in Bombay in 1919.

Blanket weaving and carpet manufacture are carried on in various parts of the country, notably in the Punjab and the United Provinces. Woollen pile carpets are made in many of the jails. Amritsar had a considerable trade at one time in weaving shawls from *pashm*, the fine under fleece of the Tibetan goat, but its place has been taken to some degree by the manufacture of shawls from imported worsted yarns, but more generally by the manufacture of carpets of a fine quality which find a ready sale in the world market. This work is done entirely on hand looms and the carpets fetch a high price.

Bibliography.—Notes on wool in India. By A. H. Silver and J. K. Mehta Govt. Press, Calcutta: 1919).

Hydro-Electric Development.

India promises to be one of the leading countries of the world in regard to the development of hydro-electric power and great strides in this direction have already been made. India not only specially lends itself to projects of the kind, but peremptorily demands them. Cheap motive power is one of the secrets of successful industrial development and the favourable initial conditions caused by the war, the enthusiasm for industrial development which has seized nearly all classes of educated Indians, and the special attention which the circumstances of the war have compelled Government to direct towards the scientific utilisation of Indian natural resources all point to a rapid growth of industrial enterprise in all parts of India within the next few years. Indeed, the process, for which sound foundations had been laid before the war, is now rapidly under way. India is severely handicapped compared with other lands as regards the generation of power by the consumption of fuel, coal or oil. These commodities are all difficult to obtain, and costly in India except in a few favoured areas. Coal supplies, for example, are chiefly centred in Bengal and Chota Nagpur and the cost of transport is heavy. Water power and its transmission by electricity offer, on the other hand, immense possibilities, both as regards the quantity available and the cheapness at which the power can be rendered, in all parts of India.

Water power schemes, pure and simple, are generally difficult in India, because the power needs to be continuous, while the rainfall is only during a small portion of the year. Perennial rivers with sufficient water throughout the year are practically non-existent in India. Water, therefore, must be stored for use during the dry season. Favourable sites for this exist in many parts in the mountainous and hilly regions where the heaviest rainfalls occur and the progress already made in utilising such opportunities by the electrical transmission of power affords high encouragement for the future. Further, hydro-electric schemes can frequently be associated with important irrigation projects, the water being first used to drive the turbines at the generating stations and then distributed over the fields. Water, as was pointed out in an interesting paper on the subject presented to the Indian Industrial Commission of 1916-18 by Mr. R. B. Joyner, C.I.E., M. Inst. C.E., lately in the Irrigation Branch of the Bombay Public Works Department and now engaged in the Tata's Hydro-Electric Works in Western India, "can be stored in this country at a third or a quarter of the cost which there would be in other countries. This is not merely on account of the cheaper labour, which would be the chief reason in an earthen dam, but in masonry or concrete dams. It is also because we do not use cement, which, for some reason not well-known to me, is generally deemed essential elsewhere, though it cannot really be so suitable."

The Industrial Commission emphasized the necessity for a Hydrographic Survey of India. On this recommendation the Government of India in 1918 appointed the late Mr. G. T. Barlow, C.I.E., then Chief Engineer, Irrigation Branch, United Provinces, to undertake the work, associating with him Mr. J. W. Meares, M.I.C.E., Electrical Adviser to the Government of India. Mr. Barlow died, but Mr. Meares issued a preliminary report in September, 1919, summarising the present state of knowledge of the problem in India and outlining a programme of investigation to be undertaken in the course of the inquiry. Mr. Meares showed that industries in India now absorb over a million horse power, of which only some 285,000 h. p. is supplied by electricity from steam, oil or water. The water power so far actually in sight amounts to 1½ million horse-power, but this excludes practically all the great rivers, which are at present uninvestigated. Thus the minimum flow of the seven great rivers eastward from the Indus is stated to be capable of giving not less than three million horse-power for every thousand feet of fall from the Himalayas, while similar considerations apply to rivers in other parts. Some doubt is expressed as to the estimate of seven million horse-power in the Irrawaddy and Chindwin rivers, given in the report of the London Conjoint Board of Scientific Studies.

The Report points out that the Bombay Presidency holds a unique position owing to its great existing and projected schemes at Lonavla, the Andhra Valley, the Nila Mula and the Koyna Valley and has the still greater advantage of possessing a firm ready to develop its resources.

Bombay Hydro-Electric Works.

The greatest water-power undertakings in India—and in some respects the greatest in the world—are the Tata hydro-electric schemes recently brought to fruition, and constantly undergoing expansion, for the supply of power in the city of Bombay. Bombay is after London the most populous city in the British Empire and it is the largest manufacturing town in Asia. Its cotton mills and other factories use over 100,000 horse power of mechanical energy and until a year or two ago this was almost entirely provided by steam, generated by coal coming from a distance—mostly Bengal. The Tata Hydro-Electric Power Scheme, now an accomplished fact, marked one of the big steps forward made by India in the history of its industrial development. It was the product of the fertile brain of Mr. David Gostling, one of the well known characters of Bombay, a little over a decade ago. The exceptional position of the Western Ghats, which rise 2,000 feet from sea-level within a very short distance of the Arabian Sea, and force the monsoon as it sweeps to land, to break into torrential rain at the mountain passes was taken full advantage of, and the table lands behind the Ghats form a magnificent catchment area to conserve this

heavy rainfall in. Mr. Gostling pressed the scheme on the attention of Mr. Jamsetji Tata for years, and with perseverance collected data which he laid before that pioneer of the larger industries in India. He summoned the aid of experts from England to investigate the plan. The scheme was fully considered for six long years. Meanwhile both Mr. J. N. Tata and Mr. David Gostling passed away, but the sons of the former continued the work of their father and on Mr. Gostling's death, Mr. R. B. Joyner's aid was sought to work out the Hydraulic side of the undertaking.

The scheme completed, a syndicate secured the license from Government and an endeavour was made to enlist the support of financiers of England who tried to impose terms which were not acceptable. Meanwhile, the attention of Sir George Clarke (now Lord Sydenham), then Governor of Bombay, and an engineer of distinction himself, was drawn to the scheme. The interest shown by him drew the attention of Indian Chiefs in the Presidency of Bombay and outside it to its possibilities, funds flowed in and a company with an initial capital of 1,75,00,000 Rupees was started.

The hydro-electric engineering works in connection with the project are situated at and about Lonavla above the Bhore Ghat. The rainfall is stored in three lakes at Lonavla, Walwhan and Shirawta, whence it is conveyed in masonry canals to the forebay or receiving reservoir. The power-house is at Khopoli, at the foot of the Ghats, whither the stored water is conveyed through pipes, the fall being one of 1,725 feet. In falling from this height the water develops a pressure of 750 lbs. per square inch and with this force drives the turbines or water wheels. The scheme was originally restricted to 30,000 Electrical horse power, but the Company, in view of the increasing demand for power from the Bombay mills, decided to extend the works by building the Shirawta Dam and issued further Shares bringing the capital to Rs. 3,00,00,000, the capacity of the scheme being increased to more than 40,000 electrical horse power. Issued Capital 7 per cent. Preference 8,735 shares fully paid and Ordinary 18,000, out of which 10,000 are fully paid and 8,000 new shares, on which Rs. 400 have been called up. There is also a Debenture Loan of Rs. 85 lakhs. The works were formally opened by H. E. the Governor of Bombay on the 8th February 1915. At present there are altogether 36 mills with motors of the aggregate B. H. P. of 40,000 in service. In addition to the cotton and flour mills which have contracted to take supply from the Company for a period of ten years, the Company have entered into a contract with the Bombay Electric Supply and Tramways Company, Limited, for energy required by them for two of their sub-stations and the necessary plant for one of these has been ordered. There remain many prospective buyers of electrical energy and the completion of the Company's full scheme will not suffice for all such demands. Besides the Bombay cotton mills, which alone would require about 100,000 horse power, there are, for instance, tramways, with possibilities of suburban extensions. The probable future demand is roughly estimated at about 160,000 H. P.

Investigations with a view to developing the electrical supply led to the discovery of a highly promising water storage site in the valley of the Andhra River, situated near the present lakes. A scheme was prepared, to be carried out by a separate company and providing for holding up the Andhra River by a Dam, about a third of a mile long and 192 feet high, at Tokewadi. This dam will hold up a lake nearly twelve miles long, the further end of which approached the brink of the Ghats at Khand. Here, a tunnel, a mile and a quarter long, will carry the water to the surge chamber, whence it will enter the pipes for a vertical drop of about 1,750 feet to the generating station at Bhivpuri, about 17 miles from the generating station at Khopoli. The scheme is designed to yield 100,000 horse power in its full development. A new company to operate the scheme was formed on the 31st August 1916, with an initial capital of Rs. 2,10,00,000, divided into 160,000 Ordinary shares of Rs. 1,000 each and 5,000 Preference shares of Rs. 1,000 each, this being the Andhra Valley Power Supply Company, Limited. This Company will pay annually to the Tata Hydro-Electric Power Supply Company 15 per cent. upon the profits (after making certain deductions), or a sum of Rs. 50,000, whichever shall be the larger sum, the intention being that the new company shall pay annually to the Tata Hydro-Electric Power Supply Company a minimum sum of Rs. 50,000. The areas intended to be supplied by this Company are the town and island of Bombay and the Suburban Municipalities of Bandra and Kurla. The Hydraulic Works consisting of the Dam, the Tunnel and the Pipe Lines, are already well in hand and have shown three seasons' satisfactory progress. Contracts for machinery have been satisfactorily entered into with manufacturers of repute. It is estimated that supply of power will commence next year.

Just as the Andhra project has been developed as a northward extension of the original scheme, so a southward development is now being carried out under the name of the Nila-Mula scheme, the name arising from the fact that the valleys of the Nila and Mula rivers are being dammed for the conservation of water for it. A company entitled The Tata Power Co., Ltd., was floated in the autumn of 1919 for the purpose, having a capital of Rs. 9 crores, divided into 30,000 7½% cumulative preference shares of Rs. 1,000 each and 60,000 shares of Rs. 1,000 each, the first and present issue being of 10,000 preference shares and 35,000 ordinary shares. One lake will be formed and from it water will be conducted direct through a short tunnel to a pipe descent to a turbine power house 1,750 feet below the forebay. The head of water will suffice to generate 150,000 horse power and the length of the transmission line to Bombay will be 70 miles. Half of the scheme, i.e., for the supply of 75,000 h. p., will first be completed and is expected to come into operation in about four years.

Nearly 100 miles southward of this Messrs. Tata propose to erect two dams in the huge valley of the Koyna river, partly to supply power to Bombay and partly to develop a great assembly of electro-chemical industries near the power installation. The preliminary

investigations for this scheme are still proceeding. The catchment area for the lake will be 346 square miles and there will be a total storage after the rains of 112,600 million cubic feet, which will be sufficient to supply a normal load of 350,000 horse power for 8,000 hours per year. The preliminary estimates provided for a capital of Rs. 8·10 lakhs to carry out the scheme.

Mysore Installation.

The first hydro-electric scheme undertaken in India or, indeed, in the East, was that on the River Cauvery, in Mysore State, which was inaugurated, with generating works at Sivasamudram, in 1902. The Cauvery rises in the British district of Coorg, and flows right across Mysore. The first object with which the installation was undertaken was the supply of power to the goldfields at Kolar. These are 92 miles distant from Sivasamudram and for a long time this was the longest electrical power transmission line in the world. Current is also sent to Bangalore, 59 miles away, where it is used for both industrial and lighting purposes.

The initial undertaking has constantly been expanded since its inauguration, so that its total capacity, which was at first 6,000 horse power, is now approximately 25,000 h.p. This is the maximum obtainable with the water which the Cauvery affords and, therefore, with the number of consumers, large and small, rapidly increasing, the necessity of a completely new installation elsewhere, to be operated in parallel with or separately from that at Sivasamudram, has been recognised. Two projects offer themselves. The first would involve the use of the River Shimsha, a tributary of the Cauvery which has natural falls, and the second, known as the Mekadatu project, would have its power house on the Cauvery, 25 miles down-river from Sivasamudram and just within the borders of Mysore State, adjacent to the Madras Presidency. The head of water available at Sivasamudram is 400 feet, that on the Shimsha 618 feet net, which would generate 39,500 e. h. p. At Mekadatu the Cauvery runs in rapids and a dam and a channel 20,000 feet long with a 22½ feet bed would be necessary. There would be three generating units, each giving an output of 4,000 e. h. p. Future extensions yielding an additional 8,000 h. p. could be made. The progressive spirit which has marked the management of the works since their inception now

characterises the manner in which the problem of further extensions are being considered.

Works in Kashmir.

A scheme of much importance from its size, but more interesting because of the developments that may be expected from it than for the part which its current supply already plays in the life of the countryside, is one installed a few years ago by the Kashmir Durbar, utilising the River Jhelum, near Baramulla, which lies thirty-four miles north-west of Srinagar. The head-works of the Jhelum power installation are situated six and a half miles from the power house and the main connection between the two is a great timber flume. These works and the forebay at the delivery end of the flume have a capacity for carrying water sufficient for the generation of 20,000 electrical horse power. Four pipes 600 feet long lead from the forebay to the power house, and from forebay to water-wheel there is an effective head of 395 feet. There are four vertical waterwheels, each coupled on the same shaft to a 1,000 k.w., 3-phase, 2,300 volt, 25-period generator running at 500 r.p.m., and each unit is capable of taking a 25 per cent. overload, which the generator end is guaranteed to maintain with safety for two hours. The power house is of sufficient capacity to allow of 15,000 k.w. generating plant being installed within it. Two transmission lines run side by side as far as Baramulla, 21 miles distant, at which point one terminates. The other continues to Srinagar, a further 34 miles. The installation at Baramulla was originally utilised for three floating dredgers and two floating derricks, for dredging the river and draining the swampy countryside and rendering it available for cultivation, but these operations have temporarily been curtailed, so that only one dredger is now in operation. The lighting of Baramulla has been taken in hand with satisfactory results and it is expected that the lighting demand will rapidly increase and that a small demand for power will soon spring up. At Srinagar, the line terminates at the State silk factory, where current is supplied not only for driving machinery and for lighting, but for heating. The greater part of Srinagar city is now electrically lighted and during the past year a motor load of over 100 k.w. has been connected with the mains, motors being hired out to consumers by the Electrical Department. This step was taken with a view to educating the people in the use of electric power and it has been entirely successful.

Silk.

In the early days of the East India Company the Indian Silk trade prospered greatly, and various sub-tropical races of the Silkworm were introduced. But the trade gradually declined for the following reasons:—

In the seventeenth and eighteenth centuries India's chief competitor in the silk trade was the Levant Company. Successful efforts, however, were made to acclimatise in Europe one or two races of a temperate worm, procured from China and Japan. When sericulture became part of the agriculture of France and Italy, a quality of silk was produced entirely different from that of India and Turkey, and its appearance created a new demand and organized new markets.

All subsequent experience seems to have established the belief that the plains of India, or at all events of Bengal, are never likely to produce silk that could compete with this new industry. On the lower hills of Northern India, on the other hand, a fair amount of success has been attained with this (to India) new worm, as, for example, in Dehra Dun and Kashmir. In Manipur, it would appear probable that *Bombyx mori*, possibly obtained from China, has been reared for centuries. The caprice of fashion has, from time to time, powerfully modified the Indian silk trade. The special properties of the *korah* silk were formerly much appreciated but the demand for them has now declined. This circumstance, together with defective systems of rearing and of hand-reeling and weaving, accounts largely for the present depression in the mulberry silk trade of India.

Mulberry-feeding worms.—Sir George Watt states that in no other country does the necessity exist so pressingly as in India to treat the subject of silk and the silk industries under two sections, viz., Bombycidae, the domesticated or mulberry-feeding silk worms; and Saturniidae, the wild or non-mulberry-feeding worms. In India the mulberry worm (*Bombyx Mori*) has been systematically reared for many centuries, there being six chief forms of it. In the temperate tracts of India various forms of *Morus alba*, (the mulberry of the European silk-producing countries), are grown specially as food for the silkworm. This is the case in many parts of the plains of Northern India, Baluchistan, Afghanistan, Kashmir, and along the Himalaya at altitudes up to 11,000 feet. The other species even more largely grown for the Indian silkworm is *M. Indica* of which there are many distinctive varieties or races. This is the most common mulberry of Bengal and Assam, as also of the Nilgiri hills.

India has three well-known purely indigenous silkworms: the *tasar*, the *muga* and the *eri*. The first is widely distributed on the lower hills, more especially these of the great central tableland, and feeds on several jungle trees. The second is confined to Assam and Eastern Bengal, and feeds on the laurel. The third exists in a state of semi-domestication, being reared on the castor-oil plant. From an art point of view the *muga* silk is the most interesting and attractive, and the cocoon can be reeled readily. The *eri* silk, on the other hand, is so extremely

difficult to reel that it is nearly always carded and spun—an art which was practised in the Khasi Hills of Assam long before it was thought of in Europe.

Experiments and results.—Numerous experiments have been made with a view to improving sericulture in India. French and other experts are agreed that one of the causes of the decline of the silk industry in India has been the prevalence of diseases and parasites among the worms, the most prevalent disease being pebrine. M. Lafont, who has conducted experiments in cross breeding, believes that improvement in the crops will be obtained as soon as the fight against pebrine and other diseases of the worms is taken up vigorously by the producers of seed and the rearers of worms, while improvement in the quality of the cocoons will be obtained by rearing various races, pure and cross bred.

In Kashmir and Mysore satisfactory results have been obtained. In the former State sericulture has been fostered on approved European principles with Italian reeling machinery, seed being imported annually on a large scale. In 1897 in Mysore Mr. Tata, after selecting a plantation and site for rearing houses, sent to Japan for a Superintendent and trained operatives. The Mysore authorities have made a grant of Rs. 3,000 a year to the Tata farm in return for instruction given to the people of Mysore in Japanese methods of growing the mulberry and rearing the insects. The products of the Mysore State are exported to foreign countries from Madras. The work of the Salvation Army is also noteworthy in various parts of India. They have furnished experts, encouraged the planting of mulberry trees, and subsidised several silk schools. The draft prospectus has been issued of a silk farm and institute to be started at Simla under the auspices of the Salvation Army. The Lieut. Governor of the Punjab has permitted the school to be called after his name, and the Punjab Government is making a grant of Rs. 2,000 this year towards the expenses. Sir Dorabji Tata has also made a donation of Rs. 1,000. The Bengal Silk Committee under the guidance of some French experts have conducted cross-breeding experiments with a view to establish a multivoltine hybrid of European quality. There is a Government sericultural farm at Berhampore, where, it is said, a pure white multi-voltine of silk worm is reared. The results of the Bengal Committee's labours may be summed up as follows: the only really effective method of dealing with the problem is to work up gradually to a point at which the whole of the seed cocoon necessary for the province will be supplied to rearers under Government supervision, and to establish gradually a sufficient number of large nurseries throughout the silk districts of the province.

In 1915 there was issued by the Agricultural Research Institute, Pusa, a *Bulletin* (No. 48 of 1915) entitled "First Report on the Experiments carried out at Pusa to improve the Mulberry Silk Industry." In a short Prefatory note Mr. Bainbridge Fletcher (Imperial Entomo-

logist) explains that the object of the Bulletin is to place on record some of the more important experiments which were commenced at Pusa in the year 1910 and have since been carried on in the endeavour to fix a superior multivoltine race of the Mulberry Silkworm which would not degenerate and which would yield silk better both in quality and outturn than that supplied by the multivoltine races which are reared at present.

Central Nurseries.—The report of the Agricultural Department, Bengal, for the year ending June 30, 1913, gives an account of a scheme which has been devised with the object of reclaiming the silk industry. The aim of the scheme is gradually to establish throughout the silk districts a sufficient number of central nurseries with rearing houses and thus enable the whole of the seed cocoons required in the province to be supplied under Government supervision. It is believed that this is the only really effective method of dealing with the problem. A number of the existing smaller nurseries were closed during 1913 and others are being converted into enlarged and improved central nurseries with rearing houses complete. The ultimate success of the scheme depends largely on the willingness of the rearers to pay an adequate price for pure seed.

A pamphlet was published in 1915, by Mr. M. N. De, Sericultural Assistant at Pusa, which contains practical hints on improved methods which are recommended to be used for reeling mulberry silk in Bengal and other silk producing districts. It has been found that, by the

provision of two small pulleys to the ordinary Bengal type of reeling machine, superior thread can be obtained, the cost of the extra apparatus is merely nominal (five or six annas per machine), whilst the suitability of the machine for cottage workers is maintained. By attention to such simple points as the stifling and storage of cocoons and the temperature and quality of the water used in the reeling pans, great improvements can be effected in most silk centres in Bengal and other districts.

Exports of Silk.—As a result of the war the trade has showed in some degree signs of revival from its decadent condition, both as regards its volume and value. The value of exports during 1915-16 improved by Rs. 12 lakhs to Rs. 27½ lakhs, of which raw silk accounted for Rs. 24 lakhs. In 1916-17 the total exports rose to Rs. 54½ lakhs.

The export of silk manufactures in 1917-18 was valued at Rs. 3,39,000.

Imperial Silk Specialist.—At the end of 1915 it was decided that the first step to be taken to revive the silk industry should be the employment of a qualified expert who, after a careful study of the conditions not only in India but in other silk-producing countries, will formulate recommendations for the consideration of Government. With the approval of the Secretary of State, Mr. H. Maxwell Lefroy, formerly Imperial Entomologist and now Professor at the Imperial College of Science and Technology, South Kensington, was appointed to the temporary post of Imperial Silk Specialist.

Indigo.

Indigo dyes are obtained from the Indigofera, a genus of Leguminosae which comprises some 300 species, distributed throughout the tropical and warm temperate regions of the globe, India having about 40. Western India may be described as the headquarters of the species, so far as India is concerned, 25 being peculiar to that Presidency. On the eastern side of India, in Bihar, Bengal, Assam and Burma, there is a marked decrease in the number of species but a visible increase in the prevalence of those that are met with.

There is evidence that when Europeans first began to export the dye from India, it was procured from the Western Presidency and shipped from Surat. It was carried by the Portuguese to Lisbon and sold by them to the dyers of Holland, and it was the desire to obtain a more ample supply of dye stuff that led to the formation of the Dutch East India Company and so to the overthrow of the Portuguese supremacy in the East. Opposition to indigo in 17th century Europe was keen owing to its interference with the wood industry, but it was competition to obtain indigo from other sources than India that led to the first decline of the Indian indigo industry. In the middle of the eighteenth century, when the cultivation of indigo in the West Indies had been given up—partly on account of the high duties imposed upon it and partly because sugar and coffee were found to be more profitable—the industry was revived in India, and, as one

of the many surprises of the industry, the province of Bengal was selected for this revival. It had no sooner been organised, however, than troubles next arose in Bengal itself through misunderstandings between the planters, their cultivators and the Government, which may be said to have culminated in Lord Macaulay's famous *Memorandum* of 1837. This led to another migration of the industry from Lower and Eastern Bengal to Tirhut and the United Provinces. Here the troubles of the industry did not end, for the researches of the chemical laboratories of Germany threatened the very existence of any natural vegetable dye. They first killed the madder dye of Europe, then the safflower, the lac and the *al* dyes of India, and are now advancing rapidly with synthetic indigo, intent on the complete annihilation of the natural dye. Opinions differ on many aspects of the present vicissitude; meantime the exports from India have seriously declined, and salvation admittedly lies in the path of cheaper production both in cultivation and manufacture. These issues are being vigorously faced and some progress has been accomplished, but the future of the industry can scarcely help being described as of great uncertainty. The issue is not the advantage of new regulations of land tenure, but one exclusively of natural *versus* synthetic indigo. (See Watt's "Commercial Products of India.") In February 1915 a conference was held at Delhi when the possibility of assisting the natural

indigo industry was considered from three points of view—agricultural, research and commercial. The agricultural or botanical side of the question is fully discussed by Mr. and Mrs. Howard of Pusa in Bulletins Nos. 51 and 54 of the Agricultural Research Institute. Other aspects of the question were fully examined last year in the Agricultural Journal of India by Mr. W. A. Davis, Indigo Research Chemist to the Government of India. An **Indigo Cess Bill** was passed in the Imperial Legislative Council in 1918. It provides for a cess on indigo exported from India for the scientific investigation of the methods of cultivation and manufacture of indigo, the proceeds of the cess being received and expended by Government.

Decline of the Industry.—Since synthetic indigo was put upon the market, in 1897, the natural indigo industry of India has declined very rapidly; apart from slight recoveries in 1906-07 and 1911-12, the decline continued without a break until the revival due to the impossibility of obtaining artificial dyes in sufficient quantities during the war. The figures for the last few years may be contrasted with those for the five years ending in 1897, in which the area under indigo averaged 2,400 square miles and the value of the exports over £3,000,000 a year.

—	Area under Indigo.	Quantity Exported.	Value of Exports.
	Acres.	Cwts.	£
1901-02 ..	791,000	89,750	1,234,837
1902-03 ..	646,000	65,377	803,738
1903-04 ..	707,000	60,410	717,468
1904-05 ..	477,000	49,252	556,405
1905-06 ..	384,000	31,186	390,918
1906-07 ..	421,000	35,102	466,985
1907-08 ..	394,000	32,490	424,849
1908-09 ..	284,000	24,946	326,986
1909-10 ..	289,000	18,061	234,544
1910-11 ..	276,000	16,939	223,529

—	Area under Indigo.	Quantity Exported.	Value of Exports.
	Acres.	Cwts.	£
1911-12 ..	271,000	19,155	250,535
1912-13 ..	220,000	11,857	147,000
1913-14 ..	176,000	10,939	142,000
1914-15 ..	148,400	17,142	599,940
1915-16 ..	314,300	41,942	1,385,428
1916-17 ..	756,400	33,500	1,383,000

Present Position.—The crop is most important in Bihar and Madras; in the Punjab and United Provinces it now occupies little over 100 square miles altogether. In Bengal the crop is largely raised by British planters, in the other provinces chiefly by native cultivators. Scientific research work on questions connected with cultivation and manufacture has been carried out by the Bihar Planters' Association, with the aid of a grant from Government since 1897.

In 1918-19 the production of indigo was estimated at 44,100 cwts. as against 88,300 the preceding year, but the exports (32,700 cwts.) were 112 per cent. above the pre-war average. The average declared value decreased from Rs. 492 per cwt. in 1917-18 to Rs. 382 per cwt.

Crop Forecast.—The Director of Statistics in his final memorandum on the crop of 1919-20 states that the total area is estimated at 233,800 acres, which is 21 per cent. below the finally revised area (296,200 acres) of last year. The total yield of dye is estimated at 37,100 cwts. as against 43,800 cwts. the finally revised estimate of last year, or a decrease of 15 per cent. The season has been generally favourable except in parts of Madras, and the condition of the crop on the whole is reported to be fair.

Details for the provinces are given below :—

Province.	Area.		Yield.		Average yield per acre.	
	1919-20.	1918-19.	1919-20.	1918-19.	1919-20.	1918-19.
	Acres.	Acres.	cwts.	cwts.	lbs.	lbs.
Madras	88,300	149,100	18,500	28,800	23	22
United Provinces	48,800	49,100	4,500	3,800	10	9
Bihar and Orissa	57,100	64,200	8,200	6,300	16	11
Punjab	19,800	16,500	3,600	3,000	20	20
Bombay and Sind (including Indian States)	8,100	7,200	1,400	1,100	19	17
Bengal	11,700	10,100	900	800	9	9
Total ..	233,800	296,200	37,100	43,800	18	17

Tea.

Tea cultivation in India is chiefly in Assam, Bengal and Southern India, the cultivation elsewhere being comparatively unimportant. The latest available official general statistics are those for the year 1918. (The statistics of production deal, for seasonal reasons, with the calendar year 1918 and those of trade with the official fiscal year 1917-18.) They show a total area of 678,500 acres under tea, 2 more than in 1915. Of this area, 625,800 acres were plucked in 1918. The total number of plantations was 4,246 against 4,209 in 1917. The area under cultivation has increased in the last 10 years by 27 per cent, and the production by 56 per cent. The average production per acre for the whole of India, excluding Burma (where the produce of the tea gardens is almost wholly converted into wet pickled tea, which is eaten as a condiment) was 609 lbs. in 1918 as compared with 606 lbs. in 1917.

Area and Production.

The total area under tea was divided between the different Provinces as follows:—

Assam—	Acres.
Brahmaputra Valley	254,754
Surma Valley (Cachar and Sylhet).	151,197
Total, Assam	405,951
Bengal	169,108
Bihar and Orissa (Chota Nagpur) ..	2,178
United Provinces	7,987
Punjab	7,508
Madras	38,528
Travancore and Cochin	44,458
Burma	2,815
Grand Total	678,533

The total production in 1918 was 368,582,688 lbs. against 371,296,338 lbs. in the preceding year divided between the different parts of India as follows:—

	Lbs.
Assam	253,270,093
Bengal	89,983,561
Bihar & Orissa	323,864
United Provinces	2,234,760
Punjab	1,388,729
Madras	10,518,373
Travancore & Cochin	22,629,250
Burma	110,345
Total	380,458,975

Features of the Trade.

The quantity exported in 1918-19 was 326 million lbs., a decrease of 35 million lbs., or 10 per cent, on the figure for the preceding year, which was the highest on record.

The main features of the year's exports were: (1) an increase in the exports to the United Kingdom, Asiatic Turkey (mainly Mesopotamia),

and Persia; (2) the complete cessation of exports to Russia; and (3) the great decrease in the exports to the United States and Canada. Shipments to the United Kingdom increased by 15 million lbs. to 282 million lbs. There were no direct exports to Russia, and China which re-exports Indian tea to Russia also took less. The shipments to France, however, more than doubled from 720,000 lbs. in 1917-18 to 1,695,000 lbs. in 1918-19. The total exports to Europe, excluding the United Kingdom, showed a decrease of 7,341,000 lbs. as compared with the year 1917-18, mainly on account of the cessation of exports to Russia. The shipments to the African countries, especially to Egypt, Cape Colony, and Natal, were much less than the record exports of the previous year. The total quantity exported was 3,400,000 lbs. as against 11,442,000 lbs. in 1917-18.

Of the American countries the direct shipments to Canada and the United States decreased to 3 million lbs. from the record figures of 42 million lbs. in 1917-18. Exports to Chile, however, considerably increased (by 2½ million lbs.) as compared with the preceding year (1917-18). The total exports to America amounted to 8 million lbs. as against 44 million lbs. in 1917-18.

In Asia, the best customers of Indian tea are China, Ceylon, Persia, Arabia, and Asiatic Turkey (mainly Mesopotamia). Arabia took 1½ million lbs. in the year under review, as against 2 million lbs. in the preceding year. The trade with China, which consists almost entirely of tea dust exported to Hankow for the manufacture of brick tea for the Russian market, decreased from 3 million lbs. to 621,000 lbs. The exports to Persia increased from 3 million lbs. to 8 million lbs., and those to Asiatic Turkey (Mesopotamia) from 2 million to 8 million lbs., as compared with the previous year. The total exports by sea to the Asiatic countries increased by four million lbs.

Australia, New Zealand, and the Fiji Islands took 7,397,000 lbs., or 3,379,000 lbs. less than in 1917-18. Exports by land were twice those of the previous year. The bulk of the exports by land goes to Afghanistan and other countries beyond the north-western frontier. If the exports both by sea and by land are taken together, the net decrease in 1918-19 was nearly 34 million lbs. or 9 per cent. The difficulties in obtaining tonnage were the controlling factor on the trade of the year.

The Director of Statistics, India, in a review of the present position and prospects of the tea industry says they appear to be more promising than two years ago. The duty (1s. per lb.) on empire grown tea has been reduced by 2d. in the United Kingdom from June 1919 and a similar concession is expected in other parts of the British Dominions, where tea is not in the free list. On the other hand, Indian tea will be faced with a serious competition in the outside markets inasmuch as a large quantity of foreign tea will be ousted from the United Kingdom. Thus the struggle for markets is expected to be keener than ever in the near future.

EXPORTS AND PRICES.

The following table shows the quantity of Tea exported by sea and by land to Foreign Countries from India, Ceylon, and China, in the years 1896-97 to 1918-19, with variations in index numbers, taking the figure of 1896-97 as 100 :—

—	India.	Ceylon *	CHINA †	
			Black and green.	Brick, tablet & dust.
	lbs.	lbs.	lbs.	lbs.
1896-97 ..	150,421,245 [100]	110,095,194 [100]	161,538,933 [100]	78,567,333 [100]
1897-98 ..	152,344,905 [101]	114,460,318 [104]	137,097,600 [85]	75,731,867 [98]
1898-99 ..	158,539,488 [105]	122,395,518 [111]	147,967,200 [92]	68,017,067 [87]
1899-1900 ..	177,163,999 [118]	129,661,908 [118]	153,669,067 [95]	71,205,067 [91]
1900-01 ..	192,300,658 [128]	149,264,603 [136]	144,270,933 [90]	52,190,667 [66]
1901-02 ..	182,594,356 [121]	144,275,608 [131]	119,390,000 [74]	42,740,533 [54]
1902-03 ..	183,710,931 [122]	150,829,707 [137]	128,226,933 [79]	78,512,400 [100]
1903-04 ..	209,552,150 [139]	149,227,236 [135]	140,607,867 [88]	83,813,600 [107]
1904-05 ..	214,300,325 [142]	157,929,333 [143]	132,366,933 [83]	61,493,733 [78]
1905-06 ..	216,770,366 [144]	171,256,703 [156]	112,152,533 [69]	70,784,267 [91]
1906-07 ..	236,090,328 [157]	171,558,110 [156]	108,864,534 [67]	79,506,133 [101]
1907-08 ..	228,187,826 [151]	181,126,298 [164]	130,022,260 [80]	84,940,000 [108]
1908-09 ..	235,039,126 [156]	181,436,718 [165]	129,265,733 [80]	80,885,733 [103]
1909-10 ..	250,521,064 [167]	189,585,924 [172]	120,174,800 [74]	79,617,600 [101]
1910-11 ..	256,438,614 [170]	186,925,117 [170]	123,947,734 [77]	84,158,943 [107]
1911-12 ..	263,515,774 [175]	184,720,534 [168]	137,788,933 [85]	57,251,467 [73]
1912-13 ..	281,815,329 [187]	186,632,380 [169]	127,826,800 [79]	69,733,200 [89]
1913-14 ..	291,715,041 [194]	197,419,430 [179]	103,038,000 [64]	70,061,600 [89]
1914-15 ..	302,556,697 [201]	191,838,946 [174]	114,689,200 [71]	84,307,733 [107]
1915-16 ..	340,433,163 [226]	214,900,383 [195]	143,662,000 [89]	93,776,667 [119]
1916-17 ..	292,594,026 [194]	208,090,279 [189]	126,260,800 [78]	79,259,723 [101]
1917-18 ..	360,623,768 [240]	195,231,592 [177]	89,115,333 [55]	10,445,866 [139]
1918-19 ..	326,645,780 [217]	180,817,744 [164]	43,422,933 [27]	10,445,866 [13]

* The figures for years previous to 1905-06 relate to the calendar year as it has been found impossible to procure complete data for the official year.

† For calendar year.

The following statement illustrates the variations in prices of Indian tea sold at auction sales in Calcutta and in declared values of exports by sea in 1888-89 and the six years ending 1918-19, the average price of 1901-02 to 1910-11 being taken as 100 in each case. The figures represent the average of the prices per pound of tea from all districts at each sale :—

Year.	Average price of Indian tea.		Average declared value of Exports by Sea.	
	Price.	Variation.	Price.	Variation.
	As.	p.	As.	p.
1888-89	8	2	8	8
1913-14	7	9	8	3
1914-15	7	7	8	3
1915-16	8	11	9	5
1916-17	8	8	9	2
1917-18	7	3	7	10
1918-19	8	0	8	9
		136		124
		129		118
		126		118
		149		135
		144		131
		121		112
		133		125

The following table shows the quantity of tea, green and black, produced, exported available for consumption in India during the years 1914-15 to 1918-19 (the figures in the last column being calculated after adding stocks left from previous year and left at end of year) :—

	Production.	Net exports.	Available balance.
	lbs.	lbs.	lbs.
1914-15	313,301,411	293,685,389	19,611,022
1915-16	372,202,674	330,520,736	31,105,038
1916-17	370,313,559	283,345,512	38,968,047
1917-18	371,296,338	346,676,007	42,120,331
1918-19	380,458,975	312,017,339	50,441,636

EXPORTS OF INDIAN TEA.

Quantity (in lbs.) of Indian Tea exported by sea (distinguished by countries of final destination) and by land in the years 1914-15 to 1918-19:—

By Sea.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19.
United Kingdom	237,303,792	250,290,291	224,927,894	266,963,516	282,205,196
Rest of Europe	20,553,116	36,821,708	27,726,612	9,150,365	1,801,569
Africa	1,412,517	2,360,123	2,393,863	11,442,137	3,399,875
Canada	10,950,615	8,842,135	8,443,092	21,152,917	926,472
U. S. A.	2,737,534	3,442,968	3,031,648	20,665,481	1,851,289
Rest of America	228,631	953,750	741,618	2,100,414	4,842,875
Ceylon	3,292,620	4,306,962	3,647,157	4,484,234	1,283,086
China	8,308,902	9,864,596	9,304,738	3,244,682	620,990
Persia	2,049,234	6,875,565	1,262,899	3,486,360	8,358,109
Asiatic Turkey	1,229,826	2,327,156	1,482,977	1,976,540	7,985,443
Rest of Asia	1,713,689	2,744,261	2,316,185	3,749,376	2,690,825
Australasia	10,990,605	9,590,672	5,160,399	10,776,375	7,397,391
By land	1,785,616	1,942,976	1,154,944	1,439,536	2,982,560
GRAND TOTAL	302,556,697	340,433,163	292,594,026	360,631,933	326,645,780

Quantity of Tea exported by sea and by land to foreign Countries from India, Ceylon, and China, in the years 1896-97 to 1918-19, with variations in index numbers, taking the figure for 1896-97 as 100:—

	India.		Ceylon. *		CHINA. †	
					Black and green.	Brick, tablet and dust.
	lbs.		lbs.		lbs.	lbs.
1896-97 ..	150,421,245 [100]		110,095,194 [100]		161,538,933 [100]	78,567,333 [100]
1897-98 ..	152,344,905 [101]		114,460,318 [104]		137,097,600 [85]	75,781,867 [98]
1898-99 ..	158,539,488 [105]		122,395,518 [111]		147,967,200 [92]	68,017,067 [87]
1899-1900 ..	177,163,999 [118]		129,661,908 [118]		153,669,067 [95]	71,205,067 [91]
1900-01 ..	192,300,658 [128]		149,264,603 [136]		144,270,933 [90]	52,190,667 [66]
1901-02 ..	182,594,356 [121]		144,275,608 [131]		119,390,000 [74]	42,740,533 [54]
1902-03 ..	183,710,931 [122]		150,829,707 [137]		128,226,933 [79]	78,512,400 [100]
1903-04 ..	209,552,150 [139]		149,227,236 [135]		140,607,867 [88]	83,813,600 [107]
1904-05 ..	214,300,325 [142]		157,929,333 [143]		132,366,933 [83]	61,493,733 [78]
1905-06 ..	216,770,366 [144]		171,256,703 [156]		112,152,533 [69]	70,784,267 [91]
1906-07 ..	236,090,328 [157]		171,558,110 [156]		108,864,534 [67]	79,506,133 [101]
1907-08 ..	228,187,826 [151]		181,126,298 [164]		130,022,266 [80]	8,940,000 [108]
1908-09 ..	235,089,126 [156]		181,436,718 [165]		129,265,733 [80]	80,885,733 [103]
1909-10 ..	250,521,064 [167]		189,585,924 [172]		120,174,800 [74]	79,617,600 [101]
1910-11 ..	256,438,614 [170]		186,925,117 [170]		123,947,734 [77]	84,158,943 [107]
1911-12 ..	263,515,774 [175]		184,720,534 [168]		137,788,933 [85]	57,251,467 [73]
1912-13 ..	281,815,329 [187]		186,632,380 [169]		127,826,800 [79]	69,733,200 [89]
1913-14 ..	291,715,041 [194]		197,419,430 [179]		109,259,733 [68]	82,274,400 [105]
1914-15 ..	302,556,697 [201]		191,838,946 [174]		117,337,867 [73]	81,125,333 [103]
1915-16 ..	340,433,163 [226]		214,900,383 [195]		143,662,000 [89]	93,776,667 [119]
1916-17 ..	292,594,026 [194]		208,090,279 [189]		126,260,800 [78]	79,259,733 [101]
1917-18 ..	360,623,768 [240]		195,231,592 [177]		89,115,333 [55]	60,936,666 [78]
1918-19 ..	326,645,780 [217]		180,817,744 [164]		43,422,933 [27]	10,445,866 [13]

* The figures for years previous to 1905-06 and also for 1917-18 and 1918-19 relate to the calendar year, as it has been found impossible to procure complete data for the official year.

† For calendar year.

Coffee.

The history of the introduction of coffee into India is very obscure. Most writers agree that it was brought to Mysore some two centuries ago by a Mahomedan pilgrim named Baba Budan, who, on his return from Mecca, brought seven seeds with him. This tradition is so universally believed in by the inhabitants of the greater part of South India, that there seems every chance of its being founded on fact. About the beginning of the 19th century there is no doubt coffee had found its way to India, and in 1823 a charter was granted to Fort Gloster, near Calcutta, authorising it to become a cotton mill, a coffee plantation and a rum distillery. Some of the coffee trees planted in fulfilment of that charter are supposed to be still alive, and about the same time coffee was successfully grown in the Botanic Gardens, Calcutta; but the industry of coffee planting nowhere found an abiding place on the plains of India but migrated to the hills of South India, in Mysore more especially, and thus into the very region where tradition affirms it had been introduced two centuries previously.

The first systematic plantation was apparently Mr. Cannon's near Chikmuglur. This was established in 1830. It is supposed, however, that Major Bevan may have actually grown coffee on the Wynad at a slightly earlier date and that Mr. Cockburn's Shevaroy plantation bears the same date as Mr. Cannon's. In 1840 Mr. Glasson formed a plantation at Manantoddy, and in 1846 plantations were organised on the Nilgiri hills.

The Position of the Industry.—The reported area under coffee has shown a continuous diminution since 1896.

It is reported that in some of the coffee-growing districts coffee is giving way to tea, or where the altitude is not prohibitive, to rubber. The advent of large supplies of cheap

Brazilian coffees in the markets of Europe has, by bringing down prices, no doubt injured the coffee industry of India very seriously; but the following figures of export trade show no marked change in the position since 1902, except in the last three years:—

				Cwts.
1902-03	..	..	..	269,165
1903-04	..	..	..	291,254
1904-05	..	..	..	329,647
1905-06	..	..	..	360,182
1906-07	..	..	..	228,094
1907-08	..	..	..	244,234
1908-09	..	..	..	302,022
1909-10	..	..	..	232,645
1910-11	..	..	..	272,249
1911-12	..	..	..	241,085
1912-13	..	..	..	267,000
1913-14	..	..	..	260,000
1914-15	..	..	..	290,000
1915-16	..	..	..	177,000
1916-17	..	..	..	198,000
1917-18	..	..	..	196,000
1918-19	..	..	..	219,000

The exports to the United Kingdom have in the last few years fallen off considerably, there has been a great diminution in the trade with France, but exports to other Continental countries have shown some increase. No estimate of the quantity of coffee consumed in India can be given.

The Forests.

The necessity of protecting the vast forest areas in India and Burma was first recognised in the Madras Presidency nearly a century ago, when steps were taken to protect on a limited scale the more valuable areas in the Anamalis, while in December 1886 Doctor Cleghorn was appointed the first Conservator of Forests in that Presidency. It was not, however, until 1856 that Lord Dalhousie laid down a definite policy with the object of affording more widespread protection to the vast areas of valuable forest in British India. The action taken by the Supreme Government came none too soon, for already in many localities the wanton hacking by the local population and even more so by timber contractors, had reduced the forests to a state from which they could not be expected to recover for many years, even under the strictest protection.

Recruitment of the Staff.

In order to introduce a system of conservative management on scientific lines it was of first importance to collect a staff of trained foresters, and as no forest training college existed at that period in England, the Government of India, as a commencement, enlisted the services of three German Forest Officers. The first of these to come to India was the late Sir Detrich Brandis, K.C.I.E., F.R.S. and it was to his extraordinary energy and abilities that a sound foundation was originally laid to the scientific management of the State forests. Soon after his arrival in India, the staff was materially strengthened by the recruitment of officers from the Indian Army. In 1869 the first batch of technically-trained English forest officers joined the service, having received their training either in Germany or in France, and this system of continental training remained in force until 1876, after which the training was carried on entirely at the National Forest school of Nancy. The first batch of Cooper's Hill trained foresters arrived in India in 1887 and the last in 1907, after which date the training took place at Oxford University, and later also at the Universities of Cambridge, Edinburgh and Dublin. In this way the Government of India have been able to collect by degrees a highly trained staff of men to carry on the administration of their State forests. The total strength of the Imperial Establishment at the present time is 237, of whom 29 are administrative officers and 219 Executive officers, among the latter are included Instructors and Research Officers who are employed at the Forest Research Institute, Dehra Dun.

In order to keep pace with the recruitment of the superior staff, a Forest School was opened in 1878 at Dehra Dun for the training of Forest Rangers. Recently this School has been converted into a College and the instruction extended to include a course for training men for the Provincial Services. Besides the Forest College at Dehra two new Rangers' Schools have been established, one at Pynmana in Burma and the other at Coimbatore in Madras. Besides this nearly every Province has estab-

lished a local Forest School for the training of the lower subordinate establishment.

Area of State Forests.

The forests belonging to the State covered in 1917-18, 251,512 square miles, or nearly one-quarter of the whole of India and Burma. Of this 101,233 square miles are Reserved Forests, 8,750 square miles Protected Forests and 141,527 square miles Unclassed forests, by far the greater portion of the latter class occurring in Burma. The distribution of these areas is by no means uniform; the majority being found in Burma, Assam, Northern Bengal and along the foot of and extending into the Himalayas from the Nepal frontier westward through the United Provinces and the Punjab. In the Gangetic valley, in the plains of the Punjab, in Sind and Rajputana few forests occur except along the rivers; nor does one come across large wooded tracts until one enters the Central Provinces and the Godavari catchment area. From there southward in the Satpuras and throughout the North and South Deccan there exist well distributed areas of forests, though generally not in large blocks, while on the Western Ghats, in the Nilgiris and Anamalis, are found some of the finest teak forests of India proper. The East Coast of India is fairly well stocked with forest growth, especially in the Godavari basin, to the west of Cuttack and Puri and again in the Sundarbans, while the Andaman Isles are densely wooded.

Revenue, Expenditure and Outturn.

The gross Revenue from State forests in 1917-18 amounted to Rs. 4,09,69,257, while the expenditure stood at Rs. 2,11,57,063, giving a net revenue of Rs. 1,98,12,194. The total outturn of timber and fuel in that year amounted to 328½ million cubic feet, The bamboos removed were valued at 15½ lakhs of rupees, while the total revenue derived from wood was 323 lakhs of rupees and from Minor Products 33 lakhs of rupees.

From the above figures it will be readily understood that not only is the revenue realised by the State considerable but that the handling of such large amounts of Forest Produce requires a competent staff of officers.

Management.

The system under which the State forests are managed varies in different Provinces. In all cases, however, the aim of the Forest Department has been to introduce Working Plans for their forests, based on European systems of management. The system most usually adopted in India, especially for working the valuable teak and sal forests, is the Selection System, in other words maintaining an equal distribution of all age classes throughout the forest. In a few cases such as in deodar and other coniferous forests and also in a few instances in sal forests, the Uniform Method or a system by which trees of more or less uniform age are grouped together has been applied and the method of mere intense

management may come into more general use in the future, as a greater number of trained officers become available. In many cases, owing to the destruction of the forests in the past, it has only been possible to prescribe Improvement Felling, though in time a more regular system of working will be introduced. The forests which are destined to supply small building timber and fuel to the local population are generally worked by either the Coppice with Standard or Pure Coppice methods, according to the state and composition of the forest, while certain areas have been put aside for the formation of Fuel and Fodder Reserves or as grazing areas.

Forest Surveys.

The preparations of maps for the State Forests is undertaken by the Great Trigonometrical Survey Department. The area for which detailed surveys have been prepared was roughly 85,605 square miles in 1917-18, to which figure yearly additions are being made. As soon as possible after the compilation of detailed maps, Working Plans are prepared for the forest, and up to 1917-18 about 60,724 square miles of Forests have been dealt with.

Method of Extraction.

Once the forests have been organized and plans of working prepared by an officer put on special duty for the purpose, it remains for the executive officers to arrange for the exploitation of the trees, according to the provisions of the sanctioned plans. This work is carried out in various ways in different localities. Sometimes it is done departmentally, as for instance in certain divisions on the West Coast and also in three or four of the western Pegu Yoma divisions, in Burma. This system which had to be adopted by the Department when work was first commenced and contractors could not be obtained, has now generally been replaced by a system of giving leases to work the forests or by selling the annual coupes standing to contractors. In the case of the valuable teak forests of Burma the system of granting leases for a period of from 10 to 20 years has generally been adopted and has been found to work satisfactorily, the trees for felling being marked by the Forest Department. In other provinces this system has been adopted on a more restricted scale, and in India proper the custom of holding annual sales and selling the trees standing has been found more convenient and profitable. The right to collect Minor Produce is generally put up for auction, which gives the highest bidder the right to collect the produce from the forest for a given period, generally one year. In order to meet the requirements of the local population a system of issuing permits is in force, the permit being issued free to right or privilege holders and on payment of a low fee to other persons. This enables agriculturists to obtain their requirements as to fuel, building timber and grass, etc., without delay and without having to pay enhanced rates to a middleman. The right to grazing is dealt with in the same way.

Important Timbers.

The forests of British India contain a vast number of trees and woody plants, in fact a far greater number than is generally realized

by the public. For instance the number of tree species is about 2,500, while the number of woody shrubs and climbers is not far short of that total. Of all Indian species of timber teak stands first, both in quality and as to the amount annually exported from the State forests. Sál comes next in importance and is obtained in the greatest quantities from the United Provinces and Nepal, while a very considerable amount is also available from Bengal, the Central Provinces, Assam and the Feudatory States of Orissa. Of other species of nearly equal importance is deodar: the timber of which is extensively used in construction and as railway sleepers; sandalwood, sissoo and blackwood, the last two timbers being highly prized for building purposes and furniture making; the sundri-wood of the Sundarbans and Bassein, used in boat and carriage building; Andaman and Burman Padauk, used for the construction of gun carriages, furniture and railway carriages; the Pyinkado of Burma, used in building and one of the first sleeper woods in the world; the Red Sandars of Madras, babul, the iron eng wood of Burma, all used for building and for a variety of other purposes and Khair from which "Cutch" is obtained. A great variety of other useful timbers could be mentioned of nearly equal importance to the above, which go to supply the requirements of the enormous population of the Indian Empire.

Minor Forest Products.

Turning now to Minor Forest Products, the most important come under the main heads, fibres, and flosses, grasses, distillation products, oil seeds, tan and dyes, gums and resins, rubber, drugs and spices, edible products, bamboos, canes, and animal and miscellaneous products. The number is very large, while some of them are of considerable economic importance, so much so that they realized nearly 137 lakhs of rupees in 1917-18. It is not possible to do more than to mention one or two of the most important of these commodities, as for instance myrabolams for tanning. Cutch is of even greater importance, being produced chiefly in Burma and the United Provinces though also prepared on a more limited scale elsewhere. Another equally well known product is lac, produced chiefly in Sind and the Central Provinces, which besides being used locally, is annually exported in the form of shellac. Of other Minor Forest Products which deserve mention are rosha and lemon oils; gum kino, babul gum, gurjan oil, thitsi damar and rubber, which are classed as exuded products; sabal grass for papermaking and munj grass for fibre and thatching; mohwa seed yielding a valuable oil, sandal and agar wood oil and the essential oils obtained from them; simul floss used for stuffing pillows; kamella powder and lac dye used for dyeing; podophyllum resin, cassia bark, cardamoms, pepper and strychnine, come under the head of drugs and spices; and a variety of other products often of considerable local values.

From what has been said above it will be seen that the Minor Products obtained from the Indian forests play by no means a small part in the economy and commerce of the country.

The statement below relating to **Exports of Forest Products** is taken from the "Annual Return of Statistics relating to Forest Administration in British India" for 1917-18, recently issued:—

Articles of Forest Produce.	Quantity in Tons of 20 cwt. in the case of teak and other timbers, cubic tons.		Valuation at Port of shipment in 1917-18.	
	Average of 5 years 1912-13 to 1916-17.	In 1917-18.	Total.	Per Ton.
Caoutchouc. raw	1,851	3,763	Rs. 1,62,19,334	Rs. 4,310
Lac { Button	1,046	138	4,24,229	3,074
{ Shell	16,023	14,484	3,59,14,763	2,480
{ Stick, seed and other kinds ..	2,258	1,499	14,39,042	960
Cutch and Gambier	3,955	2,107	6,71,267	319
Myrabclams	62,847	40,777	47,29,542	116
Cardamums	165	399	12,03,312	3,016
Sandal, Ebony and other ornamental woods	(a)	(a)	7,89,528	....
Teak	42,934	14,931	31,25,167	209
Other timbers	5,226	1,574	1,14,814	73

Total in 1917-18	646,30,998
" 1916-17	2,99,34,737
" 1915-16	4,79,30,443
" 1914-15	4,17,49,407
" 1913-14	4,54,25,118

(a) Quantity (whether by weight or measurement) is not recorded.

FOREST INDUSTRIES.

In a brochure published in 1917 the Government officially reviewed their work and indicated the scope of its development and its potentialities. The most interesting part of this memorandum was that which summarised the development of Indian forest industries. First amongst these was placed the Indian pine resin industry. In this it was stated that from very small beginnings in the United Provinces and later in the Punjab the industry has grown until for the year ending 30th June 1916, the annual resin collection in the United Provinces and the Punjab amounted to 69,980 maunds net (2,592 tons), the operations covering 62,000 acres of forest with 2,141,000 blazes or channels in work giving employment to at least 2,400 operatives. The gross revenue was Rs. 5,04,249, the gross trading account profit Rs. 1,73,892 and the net trad-

ing account profit Rs. 1,46,794, while the invested capital stood at Rs. 1,61,905. The possibilities of development of the pine industry are considerable.

Next in regard to paper it was pointed out that the present demand is supplied by the mills in India to a small extent. Of the total demand the Indian paper mills produced in normal times about 25,000 tons which during the war has risen nearly to 30,000 tons. The imports of paper and paste board in India in 1914-15 amounted to 51,390 tons valued at £ 709,372 or including note paper at a total of £ 879,298. The demand for paper in India may therefore be put at about 75,000 tons per annum of which India supplies one-third. In the matter of paper pulp India imports 13,250 tons. The most important raw material used in India is Sabaibhabar or bala

grass, which is obtained from the forests of Bengal, Chhota Nagpore, Orissa, Nepal and the United Provinces. The enormous supplies of bamboos and elephant grass available could be utilised for the manufacture of the 50,000 tons of paper and pasteboard which India now imports annually.

Another promising forest industry is matches. The difficulties under which the industry labours is that imported matches are very cheap. Great difficulties had been experienced in obtaining first class indigenous timber within the working figure of cost, railway freight has hit the local trade and the cost of landing the timber at the factory site has in many

cases turned out to be excessive. In spite of these difficulties the industry still persists and the solution of the problem in Northern India is found to lie in the erection of portable or semi-portable splint machines in the vicinity of the spruce and silver fir forests and by exporting the prepared splints to central match factories in the plains.

Another promising industry is the antiseptic treatment of timber which has given good results but for its full development requires the establishment of the manufacture of coal tar creosote locally.

The following figures show the steady growth of the forest revenue in recent years.

Financial results of Forest Administration in British India from 1864-65 to 1913-14 (in lakhs of rupees) the latter being the latest date in the most recent quinquennial official review.

Quinquennial period.	Gross revenue (average per annum).	Expenditure (average per annum).	Surplus (average per annum).	Percentage of surplus to gross revenue.
	Lakhs	Lakhs	Lakhs	Lakhs.
1864-65 to 1868-69	37·4	23·8	13·6	36·4
1869-70 to 1873-74	56·3	39·3	17·0	30·2
1874-75 to 1878-79	66·6	45·8	20·8	31·2
1879-80 to 1883-84	88·2	56·1	32·1	36·4
1884-85 to 1888-89	116·7	74·3	42·4	36·3
1889-90 to 1893-94	159·5	86·0	73·5	46·1
1894-95 to 1898-99	177·2	98·0	79·2	44·7
1899-1900 to 1903-04	196·6	112·7	83·9	42·7
1904-05 to 1908-09	257·0	141·0	116·0	45·1
1909-10 to 1913-14	296·0	163·7	132·3	44·7

This statement exhibits the striking fact that the surplus increased nearly ten-fold during the fifty years, and that it averaged £ 882,000 sterling per annum during the last quinquennial period, without including the large sum represented by the value of forest produce given away free or removed by right holders, which at a rough estimate amounts to over £ 400,000. The in-

crease in the surplus is all the more satisfactory when it is considered that all capital expenditure has been met from revenue and that a considerable proportion of this expenditure is incurred on silvicultural and other operations which as a rule do not show any return for a long period of time.

AREA OF FOREST LANDS, OUTTURN OF PRODUCE, AND REVENUE AND EXPENDITURE OF FOREST DEPARTMENT.

Province.	Area of Province	Forest Area.			Per cent. of Forests to whole Area of Province	Outturn of Produce.		Revenue.	Expenditure.	Surplus.
		Reserved Forests.	Protected Forests.	Unclassed State Forests, &c.		Timber and Fuel.	Minor Produce.			
Sq. miles.	Sq. miles.	Sq. miles.	Sq. miles.	Per cent.	Cub. ft.	Rs.	Rs.	Rs.	Rs.	Rs.
Imperial	..	78,836	4,889	1,711	13.5	20,147,000	4,188,261	*60,024	43,36,623	43,76,599
Bengal	..	106,725	6,113	1,321	7.0	33,260,000	21,93,689	13,76,969	7,38,712	6,38,257
United Provinces	..	96,650	2,112	793	7.3	35,376,000	24,02,487	61,16,697	32,04,928	29,11,769
Punjab	..	226,904	29,116	1,16,731	64.3	81,869,000	8,91,192	1,23,61,429	11,58,048	9,59,728
Burma (including Shan States)	..	82,505	1,747	..	3.4	18,898,000	2,64,353	7,53,425	5,48,717	68,74,320
Bihar and Orissa	..	48,915	5,381	16,650	45.0	13,826,000	12,36,509	13,09,956	3,90,716	3,62,909
Assam	..	99,948	19,649	..	19.7	34,326,000	22,67,743	34,65,493	6,86,627	6,23,329
Central Provinces and Berar	..	1,582	520	..	32.9	474,849	14,509	4,65,973	1,99,941	15,94,369
Coorg	..	13,057	236	..	1.8	3,204,000	30,805	3,37,711	1,53,875	1,83,836
North-West Frontier Province	..	2,767	142	..	5.1	190,259	25,545	27,733	26,504	1,229
Ajmer-Merwara	..	54,228	313	472	1.4	355,171	43,410	17,934	29,999	—12,065
Baluchistan	..	3,143	85	2,122	70.2	1,819,000	3,498	7,93,656	39,772	3,96,932
Andamans	..	142,272	18,838	668	13.7	27,265,000	25,23,737	54,58,489	30,20,349	24,98,140
Madras	123,118	12,092	..	10.2	57,656,000	13,57,930	63,12,022	33,53,714	24,58,308
Bombay	..	1,080,650	101,233	1,41,527	23.3	328,666,379	1,36,75,668	4,09,69,257	2,11,57,063	1,98,12,194
Total 1917-18	..	1,080,650	101,233	1,41,527	23.3	328,666,379	1,36,75,668	4,09,69,257	2,11,57,063	1,98,12,194
1916-17	..	1,078,585	100,308	1,37,131	2.9	306,869,398	1,24,56,596	3,70,61,931	1,87,43,883	1,83,18,047
1915-16	..	1,079,481	99,205	1,40,083	23.100	286,216,111	1,16,80,737	3,11,16,367	1,85,92,407	1,25,23,760
1914-15	..	1,079,149	97,580	1,41,882	23.15	270,455,459	1,07,63,283	2,97,09,784	1,82,03,450	1,15,03,334
1913-14	..	1,079,638	96,297	1,40,925	22.7	294,613,323	1,07,98,903	3,33,01,345	1,75,43,455	1,57,58,090
1912-13	..	1,079,163	96,867	138,564	22.1	290,718,866	738,978	3,22,09,809	1,72,07,810	1,50,01,999
Totals.	..	1,071,051	96,148	138,316	22.7	257,194,423	703,982	2,90,57,359	1,69,46,563	1,21,10,793
1910-11	..	1,071,010	96,387	138,584	22.7	260,583,175	695,188	2,74,03,454	1,52,44,023	1,21,61,431
1909-10	..	1,042,718	96,474	140,263	23.5	241,132,930	554,095	2,60,25,794	1,40,20,654	1,11,05,140
1908-9	..	1,040,872	94,561	138,378	23.2	232,035,865	526,669	2,54,56,799	1,47,26,034	1,07,30,765
1907-8	..	1,040,666	91,059	134,897	22.8	234,982,123	551,144	2,58,62,079	1,45,12,933	1,13,50,046

* Includes Rs. 8,304, being the receipt from Imperial and Imperial Forest College and Research Institute.

† Includes Rs. 3,46,291 being the expenditure incurred on account of Imperial, Imperial Forest College and Research Institute and Forest Surveys.

‡ Includes deposit of Rs. 3,37,987 on account of Imperial, Imperial Forest College and Research Institute and Forest Surveys.

RUBBER CULTIVATION.

The most important rubber-yielding tree found growing naturally in the Forests of India is *Ficus elastica*, a very large tree of the outer Himalayas from Nepal eastwards, in Assam, the Khasia Hills and Upper Burma. It has also been cultivated in Assam in the Charduar plantation in the Tezpur Sub-Division, as also in the Kulsi plantation of the Gauhati Sub-Division in the Kamrup Division. There are also a number of other rubber-yielding trees found in the Indian and Burman forests from which rubber can be collected on terms quoted by Government. Attempts have been made to cultivate Para, Ceara and Castilloa in various parts of India and Burma. In India proper the chief attempts were made on the west coast, about 180 acres being planted from 1908 onward at Gersoppa. Similar attempts have been made in Madras: but at present Para rubber is being grown as a commercial product rather in Burma than the rest of India.

The production of rubber in India is confined to Assam, Burma, and the Madras Presidency:—

	Acres.	No. of trees.
Assam	4,681	137,430
Madras	12,022	1,636,476
Burma	29,544	4,911,399
Total	46,247	6,685,305

The yield of Assam plantations is relatively small, and the number of trees to the acre is much less than in Madras and Burma. The

outturn of Madras in 1913 was more than double that of Burma, where most of the trees being less than six years old are not yet productive. All planting is stump planting about 9 to 12 months old. The trees can be tapped in four years from the date of planting. The average yield in Burma from 4 to 6 years old trees is 1½ to 3 lbs. per tree per year. The capital invested is from £22 to £25 per acre. The average cost of production is about 1s. 6d. to 1s. 10½d. per lb.

There has been a steady development in the exports of rubber from India. The exports in 1917-18 amounted to 8,430,000 lbs., the highest on record, nearly eight times the annual average exports during the pre-war quinquennium. In 1918-19 the exports rose to 13,907,000 lbs. The question of annually collecting detailed statistics regarding rubber production is under the consideration of the Government of India. The report of the Industrial Commission points out that rubber manufacture has not been started in India. "This industry", it adds, "is one of those that are essential in the national interest and should be inaugurated, if necessary, by special measures."

Bibliography.—For fuller details see "Dictionary of the Economic Products of India" and the abridged edition of the same published in 1908 under the title "The Commercial products of India" by Sir George Watts; and the "Commercial Guide to the Forest Economic Products of India" by R. S. Pearson, published by the Government Press, Calcutta, 1912.

MATCH FACTORIES.

The total imports of matches into British India in 1917-18 were over 18 million gross, valued at approximately Rs. 2.34 lakhs. This figure fell in 1918-19 to 11 million gross (of which 97 per cent. came from Japan) valued at Rs. 88 lakhs. British matches have almost disappeared from the market. Japanese matches are ordinarily of very inferior quality, but they are cheap, and as the Indian is content with a poor quality at a low price, these matches are occupying the market to the exclusion of the more highly priced matches and even to the detriment of the cheap Swedish matches. The percentage shares of the United Kingdom, Japan, and Sweden in the pre-war year were 7.53, and 26 respectively, in 1916-17 the percentages were 4.83 and 13.

In normal years matches are also imported from Austria-Hungary, Germany and Belgium. In the opinion of the Forest experts at Dehra Dun there is an abundance of raw material in this country for match manufacture.

Indian timbers for matches.—In an article in the Indian match industry which appeared in the *Indian Agriculturist* the woods of the following species are said to be employed in Burma for match splints: *Bombax insignie*, *B. malabaricum* (simul), *Anthocephalus Cadamba* (kadam), *Sarcocephalus cordatus*, *Spondias mangifera* (amra), and *Engelhardtia spicata* (palash). These woods are not the best for the

purpose, but are those most easily procurable. There are other kinds of white wood, such as poplar, pine, willow, and alder, in abundant quantities, but they are difficult to extract and transport, and are therefore costly.

The attempts to manufacture matches in India have not hitherto been attended with great success, but recently two well-equipped factories have been started in Burma which give promise of good results. One of these is in Rangoon and is owned by Chinese; the other is at Mandalay, and is under European management. Further investigations are said to be necessary in order to settle the question as to the most suitable woods to employ, and when these have been brought to a satisfactory conclusion it is thought that Burma will be able to produce matches of first-class quality. It may be added that in 1912, the latest year for which complete statistics are available, there were six match factories in India.

The Law in India prohibiting the importation of the old sulphur matches as from July 1st, 1913, has not seriously affected the position of the Swedish manufacturers, as they were able to supply another "strike-anywhere" match to take the place of the kind then prohibited, but as the new kind is dearer to manufacture the prices have gone up, and are likely to rise still further.

PAPER MAKING.

This industry before the war did not make the headway in India that had been anticipated, there being only 11 mills at work now with an authorised capital of Rs. 49½ lakhs, from which the output in 1916-17 was 31,900 tons compared with 26,450 tons, the pre-war quinquennial average. Further increases in outturn are hampered by the inability to secure new machinery and the irregular arrivals of chemicals of which the cost continues steadily to rise.

In India the effects of the war were immediately felt in the rise in the price of wood-pulp, which is used in considerable quantities by mills. The high cost of imported woodpulp and the increasing price paid for raw materials such as baib grass, the cost of transporting the raw material to the mills, and the temporarily high cost of chemicals are the chief obstacles to the development of the local industry. The position may be greatly improved when the new sources of raw materials are exploited and the products made readily available. The total consumption of paper in India is at present estimated at about 80,000 tons per annum, of which over 30,000 tons are manufactured in India, and the balance (chiefly high class stationery) is imported. The war has been of great advantage to Indian paper mills as it has resulted in curtailing the competition from abroad, and Indian mills have accordingly been able, with the decreased supply for consumption, to raise their prices.

There are five large paper mills in the country working on up-to-date Western lines, viz., at Titagarh, Kankinara and Raniganj in Bengal, the Upper India Couper Mills at Lucknow and the Reay Mill at Poona. There are also two smaller mills at Bombay and Surat which make only country paper, and there are one or two other mills which recently were not working. The five large mills have a large Government connection, as the greater part of Government orders for paper is placed in India.

The existence of the local industry depends chiefly on the supply of Sabai grass which on account of unfavourable seasons sometimes yields short crops. It is of great importance, therefore, to look for materials affording a constant outturn, and various reports have been published on the available paper-making materials. Considerable attention has been devoted to **Bamboo**, since 1875 when it was found that this plant—of which there are four chief varieties in India—yielded a fibrous paper stock which made a quality of paper superior to esparto grass and at a considerably less cost. It was at that time estimated that one acre of bamboo would yield 10 tons of dried stems equivalent to 6 tons of merchantable cellulose. In 1905 Mr. R. W. Sindall was invited by Government to visit Burma with a view of enquiring into the possibility of manufacturing paper pulp. His report on the subject appeared in March 1906. He made numerous experiments with bamboo and woods of Burma and laid down lines along which further enquiry

should be made. Subsequently Mr. W. Raitt, a pulp expert, was engaged at the Forest Research Institute in conducting tests on the treatment of bamboos by the soda and sulphate processes, the treatment of bamboo before boiling, with remarks on the utilisation of nodes and internodes. His results were embodied in the "Report on the investigation of Bamboo or Production of Paper-pulp," published in 1911. Mr. R. S. Pearson of the Forest Service, Dehra Dun, as the outcome of enquiries made throughout India published in 1912 a note on the Utilization of Bamboo for the manufacture of Paper-pulp. The yield per acre from bamboo is larger than that of grasses usually used for paper. The cost of working into pulp has been estimated to yield a product cheaper than imported unbleached spruce sulphite and unbleached sabai grass pulp. In 1915 Mr. Dhruva Sumanas published a pamphlet, *Dendrocalamus Strictus* Bamboo of the Dangs, as the result of investigations carried on in Bansda State.

The leading Indian **paper grass** for the last thirty years has been the bhaib, bhabar, or sabai grass of Northern India. It is a perennial grass plentiful in drier tracts from Chota Nagpur and Rajmahal to Nepal and Garhwal. The Calcutta mills draw their supplies from Sahibganj, Chota Nagpur and the Nepal Terai. The quantity annually exported from Sahibganj is between three to four lakhs of maunds. The cutting in these districts is said to commence in October when the plants are six or seven feet high. Sabai grass yields from 36·6 to 45·5 per cent. of bleached cellulose. A report by Mr. R. S. Pearson, Forest Economist, Dehra Dun, on the use of **elephant grasses** in Assam was issued in 1919. The most important species of grass found in the areas in which investigation has been made are *Khagra* (*Saccharum spontaneum*) and *Batta* (*Saccharum narenga*), with patches of *Nal* (*Phragmites karka*) on the more swampy ground. Hand samples of the above grasses were sent to England to be tested on a laboratory scale, while several tons were sent to an Indian paper mill to be made into paper. The results were satisfactory and proved that a very fair quality of paper can be produced from these grasses at a relatively low price. Small samples of such paper can be obtained by persons interested in these grasses from the Forest Economist, Forest Research Institute, Dehra Dun, who can also supply further details.

Imported materials.—Paper-making materials, mostly woodpulp, are normally imported to a great extent from the United Kingdom, Austria-Hungary, Sweden, and Germany. Of chemicals the bleaching material, caustic soda, and sulphur or sulphuric acid are imported chiefly from the United Kingdom. Rosin is already being manufactured by the Forest Department in the United Provinces, from crude resin obtained by tapping pine trees in the Himalayan forests, and the product is taken by the paper mills in India.

Mines and Minerals.

Total value of Minerals for which returns of production are available
for the years 1917 and 1918.

	1917.	1918.	Increase.	Decrease.	Variation per cent.
	£	£	£	£	
Coal	4,511,645	6,017,089	1,505,444	....	+33·4
Gold	2,221,889	2,060,152	....	161,737	-7·3
Salt	983,157	1,644,211	661,054	....	+67·2
Manganese-ore (a) ..	1,501,080	1,481,735	....	19,345	-1·3
Petroleum	1,092,965	1,131,904	38,939	....	+3·6
Tungsten-ore	623,074	726,321	103,247	....	+16·6
Mica (a)	508,173	625,741	117,568	....	+23·1
Saltpetre	527,666	589,190	61,524	....	+11·7
Lead and Lead-ore ..	397,478	450,477	52,999	....	+13·3
Silver	237,216	295,696	58,480	....	+24·7
Building Materials ..	249,776	238,355	....	11,421	-4·5
Tin and Tin-ore	94,495	134,635	40,140	....	+42·1
Jade Stone (a)	67,502	124,113	56,611	....	+83·9
Monazite	56,489	58,819	2,330	....	+4·6
Chromite	26,215	52,063	25,848	....	+98·6
Iron-ore	39,977	47,298	7,321	....	+18·3
Ruby, Sapphire and Spinel.	51,831	40,310	....	11,521	-22·2
Clay	9,020	13,623	4,603	....	+51
Steatite	6,470	10,921	4,451	....	+68·1
Magnesite	14,559	4,641	....	9,918	-68·1
Corundum	3,875	4,106	231	....	+6
Copper-ore	30,162	4,053	....	26,109	-86·5
Apatite .. ..	....	3,400	3,400	....	....
Barytes .. ..	....	2,948	2,948	....	....
Diamond	1,826	2,625	799	....	+43
Ochre	1,629	1,959	330	....	+20·2
Gypsum	1,035	1,139	104	....	+10·1
Asbestos	303	965	662	....	+218·5
Alum	3,707	960	....	2,747	-74·1
Bauxite	620	894	274	....	+44·2
Graphite	547	361	....	186	-34
Aquamarine	297	180	....	117	-39·4
Amber	684	87	....	597	-87·3
Molybdenite	626	62	....	564	-90·1
Potash .. ..	....	46	46	....	....
Antimony-ore	139	....	....	139	....
Samarskite	2	4	2	....	+100
Platinum	19	2	....	17	-89·5
Agate	255	....	....	255	....
Bismuth	163	....	....	163	....
Total	13,266,566	15,771,085	2,749,355	244,836	+18·8
			+2,504,519		

(a) Export values.

The feature which stands out most prominently in a survey of the mineral industries of India is the fact that until recent years little has been done to develop those minerals which are essential to modern metallurgical and chemical industries, while most striking progress has been made in opening out deposits from which products are obtained suitable for export, or for consumption in the country by what may conveniently be called direct processes. In this respect India of to-day stands in contrast to the India of a century ago. The European chemist armed with cheap supplies of sulphuric acid and alkali, and aided by low sea freights and increased facilities for internal distribution by the spreading network of railways has been enabled to stamp out, in all but remote localities, the once flourishing native manufactures of alum, the various alkaline compounds, blue vitriol, copperas, copper, lead, steel and iron, and seriously to curtail the export trade in nitre and borax. The reaction against that invasion is of recent date. The high quality of the native-made iron, the early anticipation of the processes now employed in Europe for the manufacture of high-class steels, and the artistic products in copper and brass gave the country a prominent position in the ancient metallurgical world, while as a chief source of nitre India held a position of peculiar political importance until, less than forty years ago, the chemical manufacturer of Europe found among his by-products, cheaper and more effective compounds for the manufacture of explosives.

With the spread of railways, the development of manufactures connected with jute, cotton and paper, and the gradually extended use of electricity the demand for metallurgical and chemical products in India has steadily grown. Before long the stage must be reached at which the variety and quantity of products required, but now imported, will satisfy the conditions necessary for the local production of those which can be economically manufactured only for the supply of groups of industries.

Coal.

Most of the coal raised in India comes from the Bengal—Gondwana coal-fields. Outside Bengal the most important mines are those at Singareni in Hyderabad, but there are a number of smaller mines which have been worked at one time or another.

Provincial production of coal during the years 1917 and 1918.

Province.	1917.	1918.
	Tons.	Tons.
Assam	301,480	294,484
Baluchistan	40,785	43,125
Bengal	4,631,571	5,302,295
Bihar and Orissa	11,932,419	13,679,080
Central India	198,407	199,975
Central Provinces	371,498	481,470

Province.	1917.	1918.
	Tons.	Tons.
Hyderabad	680,629	659,122
North-West Frontier Province	215	240
Punjab	49,869	50,418
Rajputana	6,045	11,334
Total	18,212,918	20,721,543

Output in 1918.—There was a large increase in the output in 1917 which was 17,326,384 tons. This record rose in 1918 to 19,847,039 tons. This is an unprecedented increase of 2,520,655 tons, or 14·55 per cent. over the output in 1917. The opening stocks were 515,874 tons and the closing stocks were 1,785,732 tons. The despatches amounted to 15,920,804 tons and the colliery consumption 1,948,764 tons (9·82 per cent. of the output). The amount of coal delivered to coking was 707,613 tons from which 185,993 tons of hard coke and 240,269 tons of soft coke were made. As in 1917 this increase was general, the only decrease being in Assam. The output in Bengal increased by nearly two-thirds of a million tons. The chief increase, however, was in Bihar and Orissa, being very nearly one and three-quarters of a million tons.

War Conditions.—Of the total output 18,977,911 tons or 95·62 per cent. were raised in Bengal and Bihar and Orissa, the percentage of the previous five years being 95·87. The difficulty of drawing any comparison between the conditions in 1917 and pre-war conditions is obvious. In 1918, practically the whole of the trade was under the Coal Controller. One of the first steps taken was to restrict the output of collieries working the poorer class coals. Whether as a result of this or not, the 25 largest concerns, the great majority of whom in 1917 showed decreases, as compared with the previous year, showed, in the year under report, increases in 18 cases. The general opinion is that the result of the restrictions above mentioned was to induce labour to these larger collieries, although other causes contributed to a general increase of labour supply. All coal, except that of markedly inferior quality, was requisitioned, at prices fixed by the Controller on the basis of cost of production *plus* a certain profit, the result being that practically every consumer in India received his coal from that officer. There was a certain and very limited amount of free coal, of an inferior character, which naturally, under the circumstances, fetched abnormally higher prices, but, as stated, the amount was very limited, owing to the fact that these collieries were restricted in output and also owing to the fact that requisitioned coal had priority as regards wagons. In other provinces there was a decrease in Assam, 2·47 per cent. and increases in the Central Provinces 29·60 per cent., in the North-West Frontier Province (output negligible), 11·62 per cent., in the Punjab, 1·12 per cent. and in Baluchistan 5·74 per cent.

The Output per person employed during the year was (a) below ground 181 tons and (b) above and below ground 113 tons. The figures for the five years preceding were (a) 178 and (b) 114. Taking each group of coalfields separately, these figures were as follows:—Bengal and Bihar (a) 185 and 182, (b) 115 and 116; Assam (a) 150 and 159, (b) 96 and 106; Baluchistan (a) 76 and 70, (b) 43 and 45; the Central Provinces (a) 122 and 122, (b) 79 and 82, and the Punjab and North-West Frontier Province (a) 58 and 72, (b) 37 and 48. The output in England in 1916 was 323 tons per person employed below ground and 251 tons per person employed above

and below ground. This largely increased output would tend to show that Indian colliery owners did not suffer much from scarcity of machinery and plant from overseas. If, however, hostilities had not been suspended when they were and manufacturers in the United Kingdom had not been set free to execute orders from India, many of which were long overdue, the scarcity of materials, especially in the case of wire ropes, would soon have begun to affect the output. The output in Assam was affected to a certain extent towards the end of the year for want of wire ropes.

IRON ORE.

Bengal and Bihar and Orissa are the only provinces in India in which iron ore is mined for smelting by European methods. Iron smelting, however, was at one time a widespread industry in India and there is hardly a district away from the great alluvial tracts of the Indus, Ganges and Brahmaputra in which slag heaps are not found. The primitive iron smelter finds no difficulty in obtaining sufficient supplies of ore from deposits that no European ironmaster would regard as worth his serious consideration. Early attempts to introduce European processes for the manufacture of pig-iron and steel were recorded in 1830 in the South Arcot District. Since that date various other attempts have been made but none proved a success before that now in operation near Barakar in Bengal. The site of the **Barakar Iron-Works** was originally chosen on account of the proximity of both coal and ore supplies. The outcrop of iron stone shales between the coal-bearing Barakar and Raniganj stages stretches east and west from the works, and for many years the clay ironstone nodules obtainable from this formation formed the only supply of ore used in the blast furnaces. Recently magnetite and hematite have been obtained from the Manbhum and Singhbhum districts, and the production from the last named district has largely replaced the supplies of ore hitherto obtained near the iron-works. The Bengal Iron and Steel Company, Limited, have now given up the use of ores obtained from the neighbourhood of Barakar and Raniganj and are now obtaining most of their ores from the Kolhan Estate, Singhbhum. Some years ago the Bengal Iron Steel Co., Ltd., secured two deposits of iron-ore in Saranda (Singhbhum) forming parts of two large hill masses known as Notu Buru and Buda Buru respectively. Recent prospecting in this part of Singhbhum has led to the discovery of numerous additional deposits of iron-ore, the extension of which has been traced into Keonjhar and Bonai States in Orissa, a total distance of some 40 miles in a S. S. W. direction. At Pansira Buru, a portion of Notu Buru, the deposit has been

opened up, and now feeds the Barakar ironworks. Pansira Buru rises to over 2,500 feet above sea level, the low ground on the west side being at about 1,100 feet above sea-level. The uppermost 400 to 450 feet of this hill has now been opened up, and the workings indicate the existence of a deposit about a quarter of a mile long, perhaps 400 feet thick and proved on the dip for about 500 feet. The ore body appears to be interbedded with the Dharwar slates, from which it is separated by banded hematite-jaspers. The ore itself is high-grade micaceous hematite, often lateritised at the outcrop. Cross-cuts into the interior of the deposit show that the hematite becomes very friable not far below the outcrop. In fact the characteristics of this ore, including the surface lateritisation, are almost exactly reproduced in the iron-ore deposits of Goa and Ratnagiri. The **Tata Iron and Steel Company** at Sakchi possesses slightly richer and purer ore-bodies in the Raipur district, supplies of ore are at present drawn from the deposits in Mayurbhanj. The ore-deposits have all been found to take the form of roughly lenticular leads or bodies of hematite, with small proportions of magnetite, in close association with granite on the one hand and granitic rocks on the other. These latter have been noted in the field as charnockites, the term being employed, rather loosely no doubt, but probably in the main correctly, to cover types of pretty widely varying acidity. In still more intimate association with the ores than either of the foregoing were found masses of dense quartz rocks, frequently banded, and banded quartz-iron-ore rocks. These last are of the types so commonly associated with Indian iron-ores, but are here not so prominent as is usually the case.

There was a considerable increase in the output of iron ore in 1918. The Tata Iron and Steel Company produced 198,064 tons of pig iron and 130,043 tons steel including rails, while the Bengal Iron and Steel Company produced 49,348 tons of pig iron, 12,114 tons of ferro-manganese and 21,776 tons of cast iron castings.

MANGANESE ORE.

This industry commenced some twenty years ago by quarrying the deposits of the Vizagapatam district, and from an output of 674 tons in 1892, the production rose rapidly to 92,008 tons in 1900 when the richer deposits in the Central Provinces were also attacked, and are now yielding a larger quantity of ore

than the Vizagapatam mines. India now alternates with Russia as the first manganese-producing country in the world. The most important deposits occur in the Central Provinces, Madras, Central India, and Mysore—the largest supply coming from the Central Provinces. The uses to which the ore is put

are somewhat varied. The peroxide is used by glass manufacturers to destroy the green colour in glass making, and it is also used in porcelain painting and glazing for the brown colour which it yields. The ore is now used in the manufacture of ferromanganese for use in steel manufacture. Since 1904, when the total output was 150,190 tons, the progress of the industry has been remarkable owing to the high prices prevailing. In 1905 production reached 247,427 tons; the following year it was more than doubled (571,495 tons), and in 1907 the figures again rose to 902,291 tons. In 1909, on account of the fall in prices the output contracted to 642,675 tons, but it almost regained its former position in 1910 when the production rose to 800,907 tons. In 1911 it fell to 670,290 tons. In 1916 the output was 645,204 tons valued F.O.B. at Indian Ports at

£1,487,026. The ore raised in the Central Provinces is of a very high grade, ranging from 50 to 54 per cent. of the metal, and in consequence of its high quality is able to pay the heavy tax of freight over 500 miles of railway, besides the shipment charges to Europe and America, for the whole of the ore is exported to be used principally in steel manufacture in the United Kingdom, Germany and the United States.

Manganese was one of the minerals which were largely affected by the war, the exports being restricted almost entirely to consignments to the United Kingdom, with a comparatively small quantity to the United States; the quantity produced in 1918 amounted to 415,357 tons, as compared with 497,052 tons in the previous year. Owing to a rise in ocean freights, prices rose to the record figure of 44d. per unit.

GOLD.

The greater part of the total output of gold in India is derived from the Kolar gold field in Mysore. During the last decade the production of this mine reached its highest point in 1905 when 616,758 ounces were raised. In 1906 the quantity won was 565,208 ounces and this figure fell to 535,085 ounces in 1907. The figures for the latter years reveal a small improvement. The Nizam's mine at Hutti in Hyderabad comes next, but at a respectable distance, to the Kolar gold field. This mine was opened in 1903. The only other mines from which gold was raised were those in the Dharwar district of Bombay and the Anantapur district of Madras. The Dharwar mines gave an output of 2,993 ounces in 1911 but work there ceased in 1912. The Anantapur mines gave their first output of gold during the year 1910, the amount being 2,532 ounces, valued at Rs. 1,51,800. Gold mining was carried on in the North Arcot district of Madras from 1893 till 1900, the highest yield (2,854 ounces) being obtained in the year 1898. The Kyaukpazat mine in Upper Burma was worked until 1903, when the pay chute was lost and the mine closed

down. In 1902 dredging operations were started on the Irrawaddy river near Myitkyina, and 216 ounces of gold were obtained in 1904; the amount steadily increased from year to year and reached 8,445 ounces in 1909, but fell to 5,972 ounces in 1910 increasing again to 6,390 ounces in 1911 and being in 1913, only 5,393 ounces. The gold craze, which was prevalent in Rangoon a few years ago, has disappeared as suddenly as it sprang up. The Burma Gold Dredging Company holds a right to dredge for gold in the bed of the Irrawaddy river and notwithstanding the obstacles encountered from time to time in the shape of floods, etc., the company has so far been fairly successful in its operations. The small quantity of gold produced in the Punjab, the Central Provinces, and the United Provinces is obtained by washing. Gold washing is carried on in a great many districts in India, but there is no complete record of the amount obtained in this way. The average earnings of the workers are very small, and the gold thus won is used locally for making jewellery.

Quantity and Value of Gold produced in India during 1917 and 1918.

	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
<i>Bihar and Orissa—</i>	Ozs.	£	Ozs.	£
Singbhum	2,462	10,133	2,085	9,905
<i>Burma—</i>				
Myitkyina	1,005·55	3,895	105·57	404
Katha	31·19	113	19·23	71
Upper Chindwin	42·18	240	46·40	264
<i>Hyderabad</i>	13,466·7	52,013	11,502·8	44,936
<i>Madras</i>	20,529	87,066	17,831	67,219
<i>Mysore</i>	536,559	2,067,541	504,412	1,936,785
<i>Punjab</i>	190·08	857	109·95	541
<i>United Provinces</i>	7·31	31	6·37	27
Total ..	574,293·01	2,221,889	536,118·32	2,060,152

PETROLEUM.

Petroleum is found in India in two distinct areas—one on the east, which includes Assam, Burma, and the islands off the Arakan coast. This belt extends to the productive oil fields of Sumatra, Java, and Borneo. The other area is on the west, and includes the Punjab and Baluchistan, the same belt of oil-bearing rocks being continued beyond the borders of British India to Persia. Of these two the eastern area is by far the most important, and the most successful oil fields are found in the Irrawaddy valley. Yennangyaung is the oldest and most developed of these fields. Native wells have been at work here for over 100 years, and in 1886, prior to the annexation of Upper Burma, the output is estimated to have averaged over 2 million gallons a year. Drilling was begun in 1887. The Yenangyat field yielded a very small supply of petroleum before 1891, in which year drilling was started by the Burma Oil Company. Singu now holds the second place among the oil fields of India. Petroleum was struck at the end of 1901, and in 1903, 5 million gallons were obtained. In 1907 and 1908 the production of this field was 43 million

gallons, and after a fall to 31½ million gallons in 1910 it rose to 56½ million gallons in 1912. Several of the islands off the Arakan coasts are known to contain oil deposits, but their value is uncertain. About 20,000 gallons were obtained from the eastern Barongo Island near Akyab, and about 37,000 gallons from Ramri Island in the Kyaukpyu district during 1911. Oil was struck at Minbu in 1910, the production for that year being 18,320 gallons which increased to nearly 4 million gallons in 1912. The existence of oil in Assam has been known for many years and an oil spring was struck near Makum in 1867. Nothing more, however, was done until 1883, and from that year up till 1902 progress was slow. Since that year the annual production has been between 2½ and 4 million gallons.

On the west, oil springs have been known for many years to exist in the Rawalpindi and other districts in the Punjab. In Baluchistan geological conditions are adverse, and though some small oil springs have been discovered, attempts to develop them have not hitherto been successful.

Quantity and value of Petroleum produced in India during 1917 and 1918 :—

	1917.		1918.	
	Quantity.	Value.	Quantity.	Value.
	Gallons.	£	Gallons.	£
<i>Burma—</i>				
Akyab	10,894	210	10,821	208
Kyaukpyu	46,821	1,408	46,598	1,487
Yenangyaung Field ..	176,979,020	681,212	203,638,043	783,826
Singu Field	85,639,166	329,635	61,035,972	234,934
Yenangyat Field	6,620,908	24,825	4,739,587	17,554
Minbu	3,468,382	14,452	4,826,735	40,223
Thayetmyo	30,000	253	63,000	527
(New Field) .. .. .	....	....	473,800	2,369
<i>Assam—</i>				
Dibgbol (Lakhimpur) ..	6,419,840	21,176	5,425,580	17,897
Badarpur	2,924,975	14,325	5,574,068	27,870
<i>Punjab—</i>				
Attock	618,598	5,155	750,000	5,000
Mianwali	919	13	807	9
TOTAL ..	282,759,523	1,092,964	286,585,011	1,131,904

Imports of kerosene decreased largely in 1918-19, being nearly 13 million gallons as compared with nearly 60 million gallons in 1916. 508,964 cwt. of paraffin wax, valued at £775,979, were exported.

Amber, Graphite and Mica.—Amber is found in very small quantities in Burma, the output for 1913 being only 2.9 cwt. valued at £87. Graphite is found in small quantities in various places but little progress has been made in mining except in Travancore. India has for many years been the leading producer of mica, turning out more than half of the world's supply. In 1914, owing to the war, the output was only 38,189 cwt. compared with 43,650 cwt. in 1913. Owing to necessary restrictions with regard to the export of mica, the output fell off considerably in the year 1915, but subsequent demand in the United Kingdom for the best grade of ruby mica led to a considerable increase in production during the following years. In 1918 the output was 51,572 cwt. as compared with 35,896 cwt. in 1917, the increase being almost entirely confined to the Bihar and Orissa field where lessees were urged to increase their output to the highest possible figure.

Tin, Copper, Silver and Lead.—The only persistent attempt to mine tin is in Burma. The output was for some time insignificant but rose in 1913 to 116 tons valued at £46,000 which fell to £38,000 in 1914. In 1918 Burma yielded 15,607 cwt. Copper is found in Southern India, in Rajputana, and at various places along the outer Himalayas, but the ore is smelted for the metal alone, no attempt being made to utilize the by-products. Only 3,619 tons were raised in 1918 compared with 20,103 tons in 1917; but the decrease is looked upon as temporary. The only Lead mine of any importance being worked in the Indian Empire is that of Bawdwin, where a very large body of high-grade lead-zinc-silver ore has now been blocked out. For many years the smelting operations of the Company were directed to recovering lead and silver from the slags left by the old Chinese miners. Those slags, however, are now practically exhausted, and the mine has reached a stage of development at which a steady output of ore is assured. In 1918 the total output was 19,074 tons, valued at Rs. 67,51,342 as against 16,962 tons in the preceding year.

Silver is obtained as a by-product in the smelting of the lead-zinc ores of Bawdwin. The output from that source during 1918 rose, from 1,580,557 oz. in 1917, to 1,970,614 oz. valued at Rs. 44,33,881.

Zinc.—A monograph on zinc ores issued by the Imperial Institute in 1917 says that during the past fifty years zinc ores have received but little attention in India, and no production was recorded until 1913. In 1914 the production was 8,553 tons, and although the output fell to 196 tons in 1915, there is a prospect of India becoming an important producer of zinc ore in the future. Important silver-lead-zinc deposits occur at Bawdwin, in Tawngpeng State, one of the Northern Shan States in Upper Burma. The mines are connected with the Mandalay-Lashio Branch of the Burma railways by a narrow-gauge line 51 miles long, the line meeting at Manhpwe, which is about 544 miles

from Rangoon. They were worked for many centuries by the Chinese for silver, and have long been known to contain zinc ore; until recently, however, no serious attempt appears to have been made to market the ore for its zinc values. In 1907 the present undertaking was started by the Burma Mines, Ltd., with the idea of recovering the lead from the old slag heaps left by the Chinese, estimated at 125,000 to 160,000 tons, and later to work the deposit. Smelting operations on these slags were first carried out at Mandalay, but later the works were transferred to Namtu, about 13 miles below the mines on the narrow-gauge railway. The deposits, which comprise an area of about 2,500 acres, have now been taken over by the Burma Corporation, Ltd., and one is being worked.

Gem Stones.—The only precious and semi-precious stones at present mined in India are the diamond, ruby, sapphire, spinel, tourmaline, garnet, rock-crystal, agate, cornelian, jadeite and amber. Amber has already been referred to; of the rest only the ruby, sapphire and jadeite attain any considerable value in production and the export of the latter has declined owing to the disturbances in China, which is the chief purchaser of Burmese jadeite. The output of diamonds is comparatively unimportant. The ruby-mining industry of Burma has lately undergone a favourable change. In 1915 the output of gems was 251,000 carats.

Wolfram.—A marked feature of the development of the mineral industries of India during recent years is the rapid rise of the wolfram industry in the districts of Mergui and Tavoy in Lower Burma. Although there was an output of 7 tons from Mergui in 1909, the industry dates practically from the following year, 1910. The output of wolfram in Burma rose from 1,888 tons in 1913 to 4,528 tons in 1917. The output in 1918 was 4,431 tons, valued at £726,321. According to an official note on the mineral production of Burma in 1917, about 80 per cent. of the Burma yield comes from the Tavoy district. Wolfram has lately been discovered on the border between the Yamethin District and the Loloing State. Since the close of the year 1917 some 20 tons of wolfram have been extracted from a concession in this locality situated to the South of Byingyé peak and numerous other prospecting licenses are being issued in the neighbourhood. Features of the new field are the complete absence of tin and the large percentage of molybdenite which is found with the wolfram. In consequence of the need for wolfram for the manufacture of high-speed steel, special measures were taken by Government to encourage the output. Several of the larger firms in Rangoon were induced to take up wolfram concessions; the shortage in the supply of labour at the mines was met by the importation of Chinese and Indian labourers through Government agency; the Deputy Commissioner, Tavoy, was relieved of his other duties in order that he might give special attention to wolfram mining; and the services of two Geological Officers, a Government Mining Engineer and an Officer of the Chinese Protectorate in the Federated Malay States were lent to the Local Govern-

ment to assist in the control of mining methods and of the labour employed on the mines. On many of the smaller mines and on some of the larger ones, the methods of working still leave much to be desired, but with the introduction of a greater number of firms of standing and with the more efficient control which is now being exercised, there has been a marked improvement both in output and in methods of mining employed.

According to the Director of the Geological

Survey, the total production of the world is about 8,000 tons per annum of concentrates carrying from 60 to 70 per cent. of tungstic trioxide. Of this Burma produces one quarter. In Siam the mining of wolfram is a recent development. Wolfram is also produced in Australia and in the Malay Peninsula. Formerly, Germany used to take over 50 per cent. of the total exports from India, but this is one of the minerals of which the export was restricted owing to the war.

Quantity and Value of Tungsten-ore produced in India during 1917 and 1918:—

	1917:		1918.	
	Quantity.	Value.	Quantity.	Value.
	Tons.	Rs.	Tons.	Rs.
<i>Bihar and Orissa—</i>				
Singhbhum	20	20,000	2·5	7,465
<i>Burma—</i>				
Kyaukse .. .. .	...	...	·1	250
Mergui	368	7,43,114	376·6	7,87,359
Southern Shan States	307	5,98,650	287	6,24,225
Tavoy	3,697·5	76,31,906	3,636·1	91,62,490
Thaton	107·5	2,30,492	91·5	2,04,945
<i>Rajputana—</i>				
Marwar	42	1,21,950	37·4	1,08,079
Total ..	4,542	93,46,112	4,431·2	1,08,94,813

Radio-active Minerals.—The General Report of the Director of the Geological Survey of India for 1913 includes a brief report by R. C. Burton on an occurrence of pitchblende at mica mines near Singar, Gaya district, Bengal. The pitchblende occurs as rounded nodules in a pegmatite that is intrusive in mica schists. Other minerals occurring in the pegmatite are mica, triplite, ilmenite, tourmaline, and uranium ochre; whitish columbite, zircon, and torbernite have also been recorded. Of these minerals triplite is stated to be the commonest.

The importance of the find of uranium oxide impregnating the triplite led to the discovery of weathered pitchblende, and as the pits were deepened the weathering became less and less until pure pitchblende was obtained. In the six months from July 1913 to February 1914, eight hundredweight of pitchblende was obtained from Abrahki Hill together with six tons of uranium earth debris, five to six hundred tons of triplite and two tons of tantalite. These ores were raised under a prospecting license in respect of Abrahki Hill alone and in March 1914, a mining lease for thirty years was obtained in respect of sixty square miles of the Singar estate. The first intention was to work only the five square miles round Abrahki and a syndicate

was formed for this purpose, which on the outbreak of war, was refused a Trading License on account of the German element in it.

Labour in Mines.

The question of the labour supply presents difficulties which are not encountered in countries where mining is a special calling. The majority of the persons working at the Indian coal mines are agriculturists, and the supply of labour, as experience has recently shown, depends to a material extent on the condition of the agricultural industry. "The major portion of those employed," says a report by the Department of Statistics, "are the aboriginal Dravidians from the mountainous country of Chota Nagpur and the Central Provinces, but a large number of other castes is also employed, particularly in the outlying fields. The majority of the workmen follow the vocation of agriculture as well as mining and return to their homes during the period of sowing and reaping, the result being that at such times the output of many of the mines is greatly restricted. At the Makum collieries of the Assam Railway and Trading Company, where the labour question continues to be a very difficult one, nearly a third of the total labour force are Mekranis, Chinese, and Nepalese. The Chinese have, however, proved unsatis-

factory, and it is unlikely that they will in future be recruited." With the increase in the depth of working the need for a skilled mining class will become accentuated, and if the price of coal remains at a sufficiently high level, further development in the introduction of coal-cutting plants may take place. During the period of high prices some nine years ago cutting plants were introduced in order to augment the output. These worked successfully, but the cost proved to be high and as labour conditions improved the machines were discarded.

Inspection of Mines.

During the year 1918 the average number of persons working in and about the mines regulated by the Indian Mines Act was 237,738 of whom 150,064 worked underground and 87,674 on the surface. This is an increase of 25,857 workers or 12·12 per cent. One hundred and forty-seven thousand two hundred and nineteen were adult males, 82,492 were adult females, and 8,027 were children under 12 years of age. Those employed in coal mines numbered 176,269, which is an increase of 22,586 compared with those employed in 1917.

Accidents.—During the year 1918, at mines regulated by the Indian Mines Act, 1901, there were 200 fatal accidents, being an increase of 34 as compared with the number in 1917, and an increase of 56 as compared with the average number of the preceding five years. In one case 10 lives, in three cases 3 lives, and in twenty cases 2 lives were lost. These accidents involved the loss of 243 lives, which is an increase of 42 as compared with 1917.

Of these accidents the Chief Inspector of Mines regards (a) 102 as being due to misadventure, (b) 63 to the fault of deceased, (c) 17 to the fault of fellow-workmen, (d) 3 to the fault of subordinate officials, and (e) 24 to the fault of the management. Nearly half the increase was in falls of roof and sides. These numbered 110, being an increase of 18 over the previous year. Eighty-four of them occurred in the coalfields of Bengal and of Bihar and Orissa and of this total the Jharia coalfield contributed nearly two-thirds. This is a serious increase of 30 over the number in 1917 and of 52 over the number in 1916. This increase is very largely due to the fact that every year more collieries reach the second stage of working, which is winning the pillars. It is not many

years ago that the number of such collieries was infinitesimal, and work in India was almost entirely confined to the much safer first stage of gallery driving. Thirty-three of these cases were due to misadventure and thirty-eight to the fault of deceased, a fence being crossed, generally to rob pillars unlawfully, in 21 of them. The remaining 13 were however preventable. Eight out of 42 cases of "falls of side" occurred in the wolfram mines of Tavoy. There were 7 accidents from explosives, causing 9 deaths. There were 3 fatal explosions of fire damp. Two caused 1 death in each case, but by the third 10 lives were lost. The number of accidents in shafts and by haulage, the next most numerous of underground accidents, increased slightly. There was, however, a considerable increase in accidents on the surface. These numbered 30 as compared with 18 in 1917 and the Tavoy District was responsible for 13 of them. Electrocution was the cause in three accidents, resulting in one death in each case. This is the same number as in the preceding year. Inefficient earthing was the cause of two of them. The installation of electricity in mines in India is increasing rapidly, and this increase is likely to be still more marked, now that there are more facilities for obtaining materials from overseas.

The **death-rate** per thousand persons employed was 1·02, while that of the preceding five years was 1·04. At coal mines only, these figures were 1·12 and 1·16, and at mines other than coal ·75 and ·70. At coal mines in England during the ten years ending with and including 1916, the death-rate per thousand persons employed varied from 1·08 (lowest) to 1·69 (highest). The death rate per million tons raised at coal mines only was 9·93, while that of the preceding five years was 10·18. At coal mines in England, during the ten years ending with and including 1916, the death-rate per million tons raised varied from 4·31 (lowest) to 6·37 (highest).

Chief Inspector of Mines in India, G. F. Adams, M. Inst. C. E.

Bibliography.—Report of the Chief Inspector of Mines in India, under the Indian Mines Act (VIII of 1901) for 1918, by G. F. Adams, Chief Inspector of Mines. Report on the Mineral Production of India during 1918. By H. H. Hayden, C.I.E., Director, Geological Survey of India.

CREMATION.

Cremation as a means of disposing of the dead is commonly adopted throughout India by the Hindus, but has been little adopted among the Europeans in India. A crematorium was started some years ago in Calcutta close to the Lower Circular Road Cemetery, at a cost of Rs. 40,000. But the return for this expenditure is disappointing. Only five or six cremations take place in Calcutta each year, in spite of the fact that the fee for cremation has been fixed by the Cremation Society of Bengal at the very low figure of Rs. 30,

subject to reductions in the case of poor families. The reason for this is thought to be that, when possible, Europeans go home to die, and the Native Christians and Eurasians are very largely Roman Catholics among whom a prejudice exists against this form of the disposal of the dead. In Bombay arrangements have recently been made for a small area in the Sewri Cemetery to be walled in, and for cremations to be carried on within it in the primitive style of the country, but in such a way as to preserve the ashes.

Industrial Arts.

The ancient industrial arts of India formed two distinct groups. The first included those allied to, and dependent upon, architecture; the second comprise those applied to articles devoted to religious ritual; military weapons and trappings, domestic accessories; and to personal adornment.

The articles of the first group were intended for some fixed and definite position, and the style of their design and the character of their workmanship were dictated by that of the building with which they were incorporated. Those of the second group were movable, and the range of their design was less constricted and their workmanship was more varied. Examples of work in both groups are so numerous, and the arts comprise such a diversity of application, that only a cursory survey can be attempted within the limits of a short review. Although the design and treatment differ in the two groups, the materials used were often the same. These materials cover a very wide range but space only permits of reference to work applied to the four materials upon which the Indian craftsman's skill has been most extensively displayed. These are stone, wood, metal and textiles.

Before dealing separately with each of these materials a few words upon the principal Indian styles are necessary. The two distinctive styles are Hindu and Mahomedan. The former may be termed indigenous, dating as it does from remote antiquity; the latter was a variation of the great Arabian style, which was brought into India in the fourteenth century, and has since developed features essentially Indian in character. The art of both Hindus and Mahomedans is based upon religion and the requirements of religious ritual. The obvious expression of this is shown in the different motifs used for their ornament. In Hindu art all natural forms are accepted and employed for decorative purposes; but in that of the Mahomedans, nearly all natural forms are rejected and forbidden. The basis of Mahomedan decoration is therefore mainly geometrical. In each of them, racial characteristics are strikingly exhibited. The keynote of Hindu work is exuberance, imagination and poetry; that of Mahomedan, reticence, intellect and good taste. The Hindus are lavish, and often indiscriminating, in their employment of ornament; the Mahomedans use more restraint. In fact the two styles may be compared, without straining the analogy, to the Gothic and classic styles in Europe. In both styles the fecundity of ideas and invention in design are marvellous, and the craftsmanship often reaches a very high standard. Hindu art had been subjected throughout the ages to many foreign influences, but the artistic instincts of the people have proved so conservative that, whether these alien ideas came from the east or the west, they have been absorbed, and are now stamped with a definite Indian character. Recognition of this fact alone should relieve the anxiety of those critics who fear that the penetration of Western art and culture into India at the present time will eventually rob Indian art of its national character.

Stone Work.—Carved stone work is the principal form of decoration employed in Hindu temples. In variety and scope it ranges from the massive figures in the Buddhist and Brahminical Cave Temples, and the detached sculpture of the temples of Southern India, to the delicately incised reliefs and elaborately fretted ornament of the Jain temples at Mount Abu. A curious fact in relation to Hindu work is that priority of date appears to have no relation to artistic development. It is not possible to trace, as in the case of Greek, Roman and Mediæval craftwork, the regular progressive steps from art in its primitive state to its culminating point and its subsequent decay. Styles in India seem to spring into existence fully developed; the earlier examples often exhibiting finer craftsmanship than those of a later date. There can be little doubt that stone carving in India was simply the application of the wood carvers' art to another material. The treatment of stone by the Hindu craftsmen, even in the constructive principles of their buildings, bears a closer resemblance to the practice of the wood-worker than to that of the stone mason. The earlier wooden examples from which the stone buildings and their decorations were derived have long since disappeared, but their influence is apparent. The keynote of Hindu design is rhythmic rather than symmetrical; that of their craftsmanship, vigour rather than refinement. In the carving of the human figure and of animals great power of expressing action is shown, and this spontaneous feeling is preserved despite the greatest elaboration and detail. The industry displayed is amazing, no amount of labour appears to have daunted the Hindu craftsmen in carrying out their huge and intricate schemes of decoration.

The stone carving on Mahomedan buildings except where Hindu carvers have been allowed a free hand, is much more restrained than that on Hindu temples. The fact that geometrical forms were almost exclusively used, dictated lower relief and greater refinement in the carving; while the innate good taste of the designers prompted them to concentrate the ornament upon certain prominent features, where its effect was heightened by the simplicity of the rest of the building. The invention displayed in working out geometrical patterns for work screens, inlay, and other ornamental details appears to be inexhaustible; while wonderful decorative use has been made of Arabic and Persian lettering in panels and their framing. To obtain a rich effect the Hindus relied upon the play of light and shade upon broken surfaces, the Mahomedans to attain the same end used precious materials; veneering the surfaces of their buildings with polished marble which they decorated with patterns of mosaic composed of jade, agate, onyx and other costly stones. Although the art of inlaying and working in hard stones was of Italian origin, it proved to be one eminently suited to the genius of the Indian craftsman; and many wonderful examples of their skill in the form of book rests, tables, thrones, footstools, vases and sword handles are extant to show the height of proficiency they attained. The treatment of precious stones by Indian jewellers may here be referred

to. Sir George Birdwood states that "the Indian jeweller thinks of producing the sumptuous, imposing effect of dazzling variety of rich and brilliant colours and nothing of the purity of his gems." This is true in a general sense and "full many a gem of purest ray serene" was utterly ruined by crude cutting and piercing. But although as early as the sixteenth and seventeenth centuries diamonds and precious stones from the Indian mines were taken to Europe to be cut, many of the finest jewels found their way back to the treasure houses of Indian princes.

Wood Work.—With a fine range of timbers suitable for the purpose, wood has played a great part in the construction and decoration of Indian buildings. Unfortunately, most of the ancient wood work has been destroyed by the action of the climate and the teeming insectivorous life of India; and that which escaped these enemies was wiped out by fire and the sword. It is therefore only possible to conjecture the height of artistic development these buildings and their decorations displayed by the copies in stone which have been preserved. Few if any examples of a date earlier than the sixteenth century are to be found. Many of these, and specimens of a later date to be seen in towns and cities throughout the country, are masterpieces of design and craftsmanship. The carved timber fronts and inner courtyards of houses in Ahmedabad, Nasik, and other parts of Western India are notable for their picturesqueness and beauty; the structural beams, the overhanging balconies, with their screens and supporting brackets, being carved in a manner which unites richness of effect with good taste and propriety. Of furniture, as the term is now understood, few examples were in use in India before Europeans introduced their own fashions. These were confined to small tables and stools, book rests, clothes chests and screens, the designs of which conformed somewhat closely to the architectural style of the period. Many of these were decorated with inlays of coloured woods, ivory and metal; while in some cases the wooden basis was entirely plated with copper, brass or silver. In Southern India, where close grained sandalwood is grown, jewel cases and boxes are enriched with carving executed with the attention to detail and the finish generally associated with the carving of ivory. Coloured lac was freely used to decorate many articles of furniture, especially those turned on the lathe; and rich colour effects were obtained in this, perhaps the most distinctive and typically Indian development of decoration as applied to woodwork.

Metal Work.—With the exception of weaving, the metal working industry employed and still employs the greatest number of artistic craftsmen in India. Copper and brass have always been the two metals most widely used for domestic purposes by Mahomedans and Hindus. The shapes of many of these humble vessels are among the most beautiful to be found in the country. They exhibit that sense of variety and touch of personality which are only given by the work of the human hand; and the shapes are those which grow naturally from the working of the material with the simplest

implements. In the technical treatment of brass and copper Indian craftsmen have shown a taste and skill unsurpassed by those of other nations, except in the department of fine casting. In this, and in the working of gold and silver, a higher standard of technical and constructive exactness has been reached by the metal workers of Europe and Japan. It may be taken as an axiom that the more beautiful the shape of an article is, and this especially applies to metal work, the less need exists for the decoration of its surface. It is equally true that the highest test of craftsmanship is the production of a perfect article without any decoration. The reason being that the slightest technical fault is apparent on a plain surface, but can be hidden or disguised on one which is covered with ornament. The goldsmiths and silversmiths of India were extremely skilful and industrious, but judged by this test their works often exhibit a lack of care and exactness in the structural portions and a completely satisfactory example of perfectly plain work from the hands of the gold and silversmiths of India is rarely to be met with. Much of the excessive and often inappropriate ornamentation of the articles that they produced owed its application as much to the necessity of hiding defective construction as it did to any purely decorative purpose. For many generations, ornaments of gold and silver were regarded in the light of portable wealth, a practice which naturally made for massiveness. These solid ornaments are most effective and picturesque; and, despite an enormous output of elaborate and delicate work from their hands, the most valuable contribution of the Indian metal workers to the sum total of man's artistic use of the precious metals will probably be found to lie in a certain barbaric note which distinguishes these pieces—a note not present in the craft work of other countries. In the design of Hindu gold and silver ornaments, religious symbols have been extensively used. The ornaments which bedeck the early sculptured figures, and those depicted in the paintings at the Cave Temples of Ajanta are precisely the same in design and use as similar articles made at the present time, thus affording a striking evidence of the inherent conservatism of the Hindu people and its effect upon an industrial art that makes a closer personal appeal than any other.

Textiles.—The textile industry is the widest in extent in India and is that in which her craftsmen have shown their highest achievements. Other countries, east and west of India have produced work equal, if not superior, in stone, wood, and metal; but none has ever matched that of her weavers in cotton and wool, or excelled them in the weaving of silken fabrics. Some of the products of the looms of Bengal are marvels of technical skill and perfect taste, while the plum bloom quality of the old Cashmere shawls is an artistic achievement which places them in a class by themselves. Weaving being essentially a process or repetition, was the first to which machinery was applied, and modern science has brought power loom weaving to such a state of perfection that filaments of a substance finer even than those of Dacca, which astonished our ancestors, are now produced in the mills of Lancashire. But

for beauty of surface and variety of texture, no machine-made fabrics have ever equalled the finest handwork of the ancient weavers of India. Many of the most beautiful varieties of Indian textile work have disappeared, killed by the competition of the power loom; and it is to be feared that under modern conditions they are never likely to be revived. In other branches of art as applied to textiles India does not hold so pre-eminent a position as in that of weaving. The printed silks and calicoes of the seventeenth and eighteenth centuries deservedly held a high place in the estimation of Western nations, whose craftsmen learnt many valuable lessons from the technical skill, and artistic taste they display. In embroidery and fine needlework the West and the Far East have more than held their own, while nothing approaching the tapestries made in Europe in the middle ages has been produced in India. The nearest approach to these are carpets and rugs. This art was introduced from Persia; but Indian craftsmen have never succeeded in equaling the finest work of their instructors either in colour or design.

Modern Conditions.—In the foregoing sketch of the ancient industrial art of India, as applied to the four principal materials employed, only a general indication of its more striking characteristics has been possible. A volume would be required to give a detailed description of any one of them, and would leave many other minor arts to be considered. All these branches of art came into existence, were developed and flourished in India when social and economic conditions were vastly different from those of the present day. Like similar artistic crafts carried on in Europe up to the end of the eighteenth century, they were executed by hand labour. The processes involved had not been discovered by scientific inquiry, such as is now understood by the phrase, but were the outcome of generations of slowly built up experience. We now come to the effect upon them of the changed conditions which have revolutionised industrial art in Europe during the last century.

The invention of the steam engine, and the application of mechanical power and scientific research to industry in Europe, mark the dividing line between ancient and modern industrial art. Not only on its technical side is this so, but the effect of these changes has been to alter the character of the work itself and the spirit which animated the craftsmen. In place of the ancient ideal of variety in design and treatment, which meant a limited output, the modern one of uniformity and unlimited output has been substituted. The capitalist has displaced the master craftsman; the organised factory, the small workshop; specialisation and division of labour have taken the place of general proficiency among the artisans; the function of the designer has been separated from that of the craftsman; local markets have been extended to serve the whole world; and the skilled handicraftsman has, in a great measure, become a machine-minder. It took about one hundred years of gradual change for the craftsmen of Europe fully to adjust themselves to these altered conditions; and during the greater portion of that period India protected by the difficulties of transport, con-

tinued its immemorial practice. Fifty years ago this protective barrier was removed by the opening of the Suez Canal, and the handicraftsmen of India have since been struggling to avoid the same fate which overtook those of Europe half a century before. With less time to adapt themselves to the changed conditions the Indian craftsmen have had to meet the competition of European rivals already fully equipped with new and unknown weapons. Even before this period of intense competition, observers interested in Indian craftwork had noticed evidences of its deterioration. The falling off, both in design and workmanship, was attributed to the conservative practice of the craftsmen; to the gradual loss of foreign markets, and to the long period of internal disorder which had deprived them of both the patronage of the rulers of an earlier age and the stimulating contact with foreign craftsmen who had previously been attracted to the splendid courts at Delhi and Agra. During the same period, an even greater degradation in design had overtaken the craftwork of Europe. This was due to entirely different causes, namely to the introduction of machinery. Attention had been so concentrated upon speedy production, mechanical accuracy and commercial organisation that beauty of design had been almost entirely neglected. This was so forcibly demonstrated at the International Exhibition of 1851 that efforts were at once made to bring art and industry together once more. Schools of Art and Museums were founded throughout England and the same system was copied in a tentative and timid fashion in India. The function of these institutions was accurately estimated in England, where the artistic industries were already highly organised and were commercially successful, and whose products were to be found in every market of the world. Their business was to assist these industries by training a body of efficient designers capable of furnishing the factories with suitable designs, new or old, and in any style, to satisfy the requirements of customers in any country. It was never supposed for an instant that a School of Art could lead an industry. In India their function was as completely misunderstood as were the causes of the depression in Indian craftwork. The schools were not only expected to lead the industries which were living, but to revive those which were moribund, and resurrect those which were dead. Archaeologists ignoring the economic factor vainly conceived and propounded the idea that the salvation of the industrial arts was to be found in strict adherence to ancient methods of work and a repetition of the old patterns at a time when the home markets of the craftsmen were swamped with cheap machine-made goods printed in the old pattern which had been copied and adopted by European designers. In India, the cart was put before the horse, and, instead of first reorganising the artistic crafts, and placing them on a commercial basis that would have afforded them a decent chance of meeting Western competition, and then instituting art and craft schools in every industrial centre to assist them, an entirely inadequate number of art schools was founded and the crafts were left to shift for themselves. The Japanese have demonstrated the possibility of transforming a nation of

individual artistic craftsmen into one of co-operative industrial craftsmen; and however much one may regret the necessity, the only road to the economic revival of craftwork in India is that which has already been taken by Western nations and Japan. That work of the same quality, or even of a similar character to that which was done in the past, will be produced under the new system cannot be expected. Both in Europe and Japan the change has been followed by deterioration in design, and India cannot hope to escape where others have suffered. But the artistic instinct and a love of beautiful things are widespread and firmly rooted in the Indian character. The craftsmen possess powers of invention in design equal to that of any other people, but these have been suppressed for a century by the depressing conditions with which they have had to contend. If the artistic industries can be established upon a basis in conformity with, and not in antagonism to, modern economic conditions, the artistic instinct and technical skill of Indian craftsmen will revive and India

will regain the honourable place she once held in the world of art. In the report of the Indian Industrial Commission the need for some State-aided system of industrial and commercial organisation of the industrial arts with an expanded scheme of technical and artistic instruction for the craftsmen has been recognised; and valuable suggestions were made by experts who gave their evidence when the Commission visited the different Provinces. The success of the scheme recommended by the Commission will depend entirely upon the energy with which it is applied, and the practical knowledge and the assistance required by each of the different crafts on the part of those who control it. If, in addition, the same financial assistance and encouragement are given by the Imperial and Local Governments to the Indian craftsmen that have been bestowed by their own Government upon the art workers of Japan, industrial art in India will quickly emerge from the cloud of depression, which has hung over it for a century past, into the sunlight of prosperity.

The Fisheries of India.

The fisheries of India, potentially rich, as yet yield a mere fraction of what they could were they exploited in a fashion comparable with those of Europe, North America or Japan. The fishing industry, particularly the marine section, has certainly expanded considerably within the last 50 years concurrently with improvement in the methods of transport and increase in demand for fish, cured as well as fresh, from the growing populations of the great cities within reach of the seaboard. The caste system, however, exerts a blighting influence on progress; fishing and the fish trade are universally relegated to low caste men who alike from their want of education, the isolation caused by their work and caste, and their extreme conservatism, are among the most ignorant, suspicious and prejudiced of the population, extremely averse from amending the methods of their forefathers and almost universally without the financial resources requisite to the adoption of new methods, even when convinced of their value. Higher caste capitalists have hitherto fought shy of association with the low caste fishermen, and, except in the case of joint stock companies to engage in large operations on new lines, these capitalists cannot be counted upon to assist in the development of Indian fisheries. As in Japan, it appears that the general conditions of the industry are such that the initiative must necessarily be taken by Government in the uplift and education of the fishing community and in the introduction and testing of new and improved apparatus and methods.

The first local Government to lead the way was that of Madras, which in 1905 initiated an investigation of the industry, both marine and fresh-water, appointing Sir F. A. Nicholson to supervise operations. Bengal followed suit in 1906, and from these beginnings have sprung the two local Fisheries Departments of Madras, and of Bengal, Behar and Orissa. Bombay, the remaining seaboard province, has comparatively small fresh-water interests compared with Madras and Bengal, and as it happens that her marine fisheries are favoured with good harbours and the most enterprising race of sea-fishermen in India, there was less urgent need for State help in the industry. Hence fisheries there are only now becoming the subject of Government solicitude, their care being apportioned to the newly created Department of Industries.

Madras.

The Madras coast line of 1,750 miles is margined by a shallow-water area within the 100 fathom line of 40,000 square miles; outside of a mere fringe inshore, this vast expanse of fishable water lies idle and unproductive. The surf-swept East coast is singularly deficient in harbours whereon fishing fleets can be based, and so from Ganjam to Negapatam, the unsinkable catamaran, composed of logs tied side by side, is the only possible sea-going fishing craft. Its limitations circumscribe the fishing power of its owners and consequently these men are poor, and the produce of their best efforts meagre compared with what it would be if better

and larger boats were available and possible. The West coast is more favoured. From September till April, weather conditions are good enough to permit even dugout canoes to fish daily. The people of this coast are fond of fish and, as no difficulty is found in beaching canoes and boats throughout this season, the fishing population is a large one. The 1911 Census gave 75,013 adults as subsisting on fishing industries in Malabar and S. Kanara, a small number after all, considering the immense wealth of these seas. The chief fishes are sardines, mackerel, catfishes and jewfishes (*kora* or *gol*); the two first overshadow all others. So greatly in excess of food requirements are the catches of sardines that every year large quantities are turned into oil and manure. Fishing outside the 5-fathom line is little in evidence, save by Bombay boats (Ratnagiri) which are engaged in drift netting for bonito, seer and other medium-sized fishes. These strangers are enterprising fishers and bring large catches into Malpe and Mangalore and other convenient centres; the material is largely cured for export.

Fish-curing is practised extensively everywhere on the Madras coasts; its present success is due primarily to Dr. Francis Day who, after an investigation from 1869-71 of the fisheries of the whole of India, pressed for the grant to fishermen of duty-free salt for curing purposes within fenced enclosures. He advocated much else, but the time was not ripe and the salt concession was the sole tangible result of his long and honourable efforts. His salt suggestions were accepted by the Madras Government, and from 1882 a gradually increasing number of yards or bonded enclosures were opened at which salt is issued free of duty and often at rates below the local cost of the salt to Government. At present about 140 of such yards are scattered along the coast and over 50,000 tons of wet fish are annually cured therein.

The **pearl** and **chank** fisheries in Palk Bay and the Gulf of Mannar are Government monopolies. The former are now of little value and no remedial measures seem possible; the latter have been brought to a high state of efficiency and bring in substantial returns: the net profit for 1918-19 was Rs. 67,580. Chanks or conche (*Turbinella pium*) are handsome porcelain white shells of great thickness and considerable size, much in demand in Bengal, particularly Dacca, where the industry centres, for manufacture into bangles.

The **inland fisheries** of Madras compare unfavourably with those of Bengal. Many of the rivers dry up in the hot season and few of the many thousands of irrigation tanks throughout the province hold water for more than 6 to 9 months. As a consequence inland fisheries are badly organized and few men devote themselves to fishing as their sole, or even main, occupation. The custom is to neglect or ignore the fishery value of these streams and tanks so long as they are full of water; only when the streams shrink to pools and the tanks to puddles do the owners or lessees of the fishing rights turn out to catch fish. The result is a dearth of fish throughout the greater part of the year,

a glut for a few days, and often much waste in consequence. The chief fresh-water fishes of economic importance are the murrel, notable for its virtue of living for considerable period out of water, various carps, and catfishes, the hilsa (in East Coast rivers only), and the catla. In the Nilgiris, the Rainbow trout has been acclimatised and thrives well. The Nilgiri Game Association maintain a hatchery at Avalanche, where quantities of fry are hatched and reared for the replenishment of the streams of the plateau.

The Madras Department of Fisheries.

As Government attention has been given in Madras over a longer period to the improvement of fisheries, and a larger staff concentrated upon the problems involved than elsewhere, this Presidency has now the proud position of knowing that her fisheries and collateral industries are better organized and more progressive than those in other provinces. The credit for the wonderful success which has been achieved and the still greater promise of the future, is due in large measure to the wise and cautious plans of Sir F. Nicholson, who from 1905 to 1918 had the guidance of affairs entrusted to him. In 1905 he was appointed on special duty to investigate existing conditions and future potentialities: in 1907, a permanent status was given by the creation of a Fisheries Bureau, and this in turn has developed into a separate Department of Government, now administered by Mr. James Hornell, F.L.S., as Director. Sir F. Nicholson continues to accord his valuable assistance as Honorary Superintendent of West Coast stations. The higher staff consists of a Marine Biologist charged primarily with the investigation of the life-histories of the principal food-fisheries of the coast; a Marine Assistant in charge of the departmental fisheries (pearling, chanks, beche-de-mer, etc.) and with experiments in the development of inshore and deep-sea fishing methods; an Assistant Director who supervises the co-operative and socio-economic side of the Department's operations, a Piscicultural Assistant exclusively employed upon inland pisciculture, and other officers who have charge respectively of sections dealing with education and industrial work, which include a Training Institute for village teachers, experimental and demonstration canneries, fish-curing yards, and oil and guano factories. The public fish-curing yards now under the control of the Salt and Abkari Department will eventually pass into the charge of the Fisheries Department; at present as a trial measure, 6 yards have been transferred and are now being operated directly under the latter Department, with a view to the introduction of better methods, and improved hygiene. Other newly opened yards are also being administered on model lines by the Department. Its activities are so varied and far reaching that it is difficult even to enumerate them in the space available, much less to give details. So far its most notable industrial successes have been the reform of manufacturing processes in the fish-oil trade, the creation of a fish-guano industry, the establishment of a fish cannery and the development of canned goods other than sardines, which alone had been canned previously in Malabar, and the opening of an oyster farm conducted under hygienic conditions. (For details see the Bulletins of the

Department, issued from the Government Press, Madras; eleven volumes have been issued to date). All this work has been carried on under serious handicap for want of suitable accommodation for the research staff; prior to the war proposals were elaborated for headquarters buildings in Madras comprising laboratories, experimental hatcheries, and a large public aquarium; postponed owing to war conditions these are again under discussion. In Madras the Department controls a small public aquarium, deservedly popular as the first and only one on the Asiatic mainland.

Fishing rights in the large irrigation tanks were transferred from Government to local authorities many years ago; these tanks are now being reacquired by Government in order that they may be restocked periodically by the Department; the results so far have shown a profit on the operations. To breed the necessary fry, three fish farms are in operation, and the construction of two more is proposed. In these the chief fish bred are the Gourami, obtained from Java, and *Etrorplus suratensis*, which has the excellent attribute of thriving and breeding as well in brackish as in fresh water; both protect their eggs while developing, a useful habit and both are largely vegetarian in diet. A further activity is represented by the breeding of small fishes specially addicted to feed upon the aquatic larvæ of mosquitoes. These are supplied in thousands to municipalities and other local authorities at a nominal price, for introduction into mosquito-haunted sheets of water. The educational work of the Department is becoming one of its most important branches whether it be in specially training teachers for schools in fishing villages, in training men in the technology of curing, canning, and oil manufacture; in co-operative propaganda and in the supply of zoological specimens for the use of college classes and museums. The last named has filled a long-felt want and is contributing materially to the advancement of the study of zoology throughout India; there is now no need to obtain specimens from Europe.

The development of deep-sea fishing is engaging the attention of Government; splendid trawl grounds are indicated off Cape Comorin extending over an area of some 4,000 square miles; other promising areas are known elsewhere, but so far the limiting factors are the lack of cold storage accommodation at any port in the Presidency, and the want of a deep water harbour in the south, where steam-trawlers can discharge direct into store.

Bengal & Bihar & Orissa.

The fishing value of this extensive deltaic region lies primarily in the enormous area occupied by inland waters—rivers, creeks, heels, and swamps, to say nothing of paddy fields and tanks. These swarm with fish and, as the Hindu population are free to a large extent from the aversion to a fish-diet which is widely prevalent among the better castes in the south, the demand for fish is enormous. Rice and fish are indeed the principal mainstays of the population and not less than 80 per cent. of the people consume fish as a regular item of diet. It is calculated that 1.6 per cent. of the population is engaged in fishing and its connected trades, a percentage that rises to 2.6 in the

Presidency, Raj Shahi, and Dacca Divisions. 644,000 persons in Bengal subsist by fishing with 324,000 maintained by the sale of fish, and this in spite of the fact that fishing is not considered an honourable profession. As a fresh-water fisherman the Bengali is most ingenious, his traps and other devices exceedingly clever and effective—in many cases too effective—so eager is he for immediate profit, however meagre this may be. The greatest inland fishery is that of the hilsa (*Clupea ilisha*) which annually migrates from the sea in innumerable multitudes to seek spawning grounds far up the branches of the Ganges and the other great rivers. Other valued and abundant fishes are the rohu (*Labeo rohita*) and the katla, (*Catla catla*); prawns abound everywhere. Of important fishes taken in the lower reaches of the rivers and in the great network of creeks spread throughout the Sunderbans, the bekti (*Latescalcarifer*) and the mullets are the most esteemed; apart from these estuarine fish the most valuable sea-fishes are the mango-fishes (*Poly-nemus*), pomfrets and soles. The Sea-fisheries are as yet little exploited, the fishermen of Orissa, where alone coastal fishing is of any local importance, having no sea-craft save catamarans of inferior design and construction.

For administrative fishery purposes Bengal, Behar and Orissa constitute a single region under one Department of Fisheries, whereof the Director is Mr. T. Southwell, A.R.C.S. Following the inquiry begun in 1906 by Sir K. G. Gupta, an investigation of the steam trawl potentialities of the head of the Bay of Bengal was undertaken, the trawler *Golden Crown* being employed for the purpose. The results showed that there are extensive areas suitable for trawling and capable of yielding large quantities of high class fish. Much attention was devoted during these trawl cruises to the acquisition of increased knowledge of the marine fauna, the results being published in the Records and Memoirs of the Indian Museum. For various reasons, the chief perhaps being the hostility of vested interests, the lack of cold storage facilities and the loss of time involved by the trawler having to bring her catches to Calcutta instead of sending them by a swift tender, the experiment was financially a failure and was dropped. With ever-increasing demand for fish in Calcutta and the concurrent rise in prices, the prospects of remunerative steam-trawling are now much more promising and there seems a prospect of one or more steam trawling companies being floated in the immediate future. The trade is a difficult one to organize and without a rare combination of technical fishery knowledge and far sighted and comprehensive organization the danger run by the investing public will be considerable.

The Bengal Fisheries Department has of necessity a more limited scope for its activities than in the case of Madras. Practically no coastal minor industries exist, neither do the natural conditions lead us to suppose that any can be created without extreme difficulty, and in the absence of a great trawl industry which alone might be able to call into existence factories devoted to the utilization of fish-bye-products. The most profitable utilization of the energy of its officers would appear to lie in the uplift of the general fishing population

with a view to free them from the tyranny of the mahajans (fish contractors and middlemen) and enable them to put more capital into their business and to conduct it co-operatively. This is necessarily extremely slow work, but the Department has made a beginning and once a few societies can be made successful, the news of the benefits conferred on the members will constitute the best possible form of propaganda.

Scientific investigation has bulked largely in the output of work by the Department not always directly connected with fishery science. Among the more important contributions are papers on fish parasites and on the life histories and anatomy of the fresh-water mussels. The latter are used extensively at Dacca in the manufacture of cheap pearl buttons. The Dacca bangle factories carry on an important local industry of very ancient standing; their material is almost entirely obtained from the South Indian and Ceylon chank fisheries already alluded to.

Bombay.

Whereas Bengal's fisheries are at present confined principally to inland waters, those of Bombay are concerned, save in Sind, almost entirely with the exploitation of the wealth of the sea. Bombay is favoured with a coast line abounding with excellent harbours for fishing craft, a fair-weather season lasting for some seven months, and a fishing population more alive to their opportunities and more daring than those of the sister Presidencies. Bombay sea-fisheries are of very great importance financially as well as economically and, though there is less necessity for a special department to develop marine industries, there is ample scope for most useful work in improving curing methods, in introducing canning, and in the development of minor marine industries particularly those connected with the utilization of bye-products. With this end in view the recent Director of Industries, Mr. P. J. Meade, C.I.E., I.C.S., obtained the sanction of Government to include 'Fisheries' within his purview, and there are now two officers in the Department engaged upon fishery investigation and development.

The more important sea-fish are pomfrets, soles and sea-perches among which are included the valuable Jew-fishes (*Sciaen* spp.) often attaining a very large size and notable as the chief source of "fish-maws" or "sounds," largely exported from Bombay for eventual manufacture into isinglass. The finest of Bombay fishing boats hail from the coast between Bassein and Surat. These boats are beautifully constructed, attain a considerable size, and are capable of keeping the sea for weeks together. In the season they fish principally off the Kutch and Kathiawar coasts and in the mouth of the Gulf of Cambay. Their main method of fishing is by means of huge anchored stow nets, which are left down for several hours and hauled at the turn of the tide. The chief catches are bombil (Bombay-ducks), pomfrets and jew-fishes. The first named are dried in the sun after being strung through the mouth upon lines stretched between upright posts. South of Bombay the fishermen of Ratnagiri and Rajpur make use of another and lighter

class of fishing boat, specially designed for use in drift-net fishing. Fine hauls of bonito, seer (a large form of mackerel) and allied fishes are often made during the season from September to January and later of shark and rayfish. For the latter specially large and powerful nets are employed. For part of the fair season, when fishing is not usually remunerative, many of the larger Bombay fishing boats are employed as small coasters, a fact which shows how large they run in size.

In **Sind** considerable sea-fishing is carried on in the neighbourhood of Karachi chiefly for large and coarse fish, as shark, rays and jewfishes. The edible oyster trade of Karachi was once extensive, the creeks of the Indus producing a species of oyster superior to that found in Bombay and Madras backwaters and estuaries. Unrestricted exploitation of beds of limited extent inflicted great harm, and now, when various salutary restrictions are imposed the beds are slow to respond. Occasionally large deposits of the window-pane oyster (*Placuna placenta*) are found in the Indus creeks and as these produce seed pearls in abundance, Government leased the beds to the highest bidder. The pearls are largely exported to China for use in medicine. Considerable fisheries exist in the River Indus, chiefly for the fish known as palla, which are annually leased out by Government for about Rs. 20,000.

In the Gulf of Kutch two pearl fisheries exist, one for the true pearl oyster, the other for the window-pane oyster. The former is carried on by His Highness, the Maharaja of Jamnagar, the other partly by this Prince and partly by the administration of His Highness the Maharaja Gaekwar of Baroda. The latter industry owes its local existence to the enterprise of the Baroda Government who in 1905 obtained the services on deputation of the officer who is now Director of Fisheries in Madras, for the purpose of examining the Marine potentialities of the Baroda territory in Kathiawar. One of the consequences was the discovery of large deposits of pearl-bearing window-pane oysters, until then unknown; of late years these beds have produced annually from Rs. 15,000 to Rs. 25,000 in revenue, perhaps the best example we have in India of the profitable nature of well-directed scientific enquiry into fishery problems. The Baroda Government, continuing their enlightened interest in the fishery development have had two officers trained in the Madras Fisheries Department and now employ them in development work on the Baroda coast.

Burma.

As with Bengal, the main fisheries of Burma are those in inland waters. From time immemorial the exclusive right of fishing in certain classes of inland waters has belonged to the Government, and this right has been perpetuated in various fishery enactments, the latest of which is the Burma Fisheries Act of 1905. Fishing is also carried on along the coast, but the sea fisheries absorb but a small portion of industry. Most of the fishermen labour in the streams and pools, which abound particularly in the Delta Districts. The right to work these fisheries, mentioned in the enactments alluded

to above, is usually sold at auction, and productive inland waters of this kind often fetch very considerable sums. River fishing is largely carried on by means of nets, and generally yields revenue in the shape of licence fees for each net or other fishing implement used. Here and there along the coast are turtle banks which yield a profit to Government. In the extreme south the waters of the Mergui Archipelago afford a rich harvest of fish and prawns, mother-of-pearl shells and their substitutes, green snails and trochans, shark-fins, fish-maws, and beche-de-mer. Pearling with diving apparatus was introduced by Australians with Filipino and Japanese divers in 1893. They worked mainly for the shell, it being impossible for them to keep an effective check on the divers as regards the pearls. After about five years, when the yield of shell had decreased, they all left. The industry was then carried on by the Burmese.

In 1918, the Burma Government deputed one of their civilians to study the methods of fishery development found successful in Madras. His report and recommendations are now before Government. From what is known of fishery conditions in Burma, the coastal fisheries appear more backward and undeveloped than anywhere else in India. This is due partly to the fact that the Burman is a poor sailor, and partly to the ease with which the population can earn a fair living by agriculture and other less hazardous and more profitable callings. The stress of population has not yet been felt in Burma.

The Punjab.

A Punjab Fisheries Department came into being as an experimental measure in 1912 and received the official sanction of Government as a regular department of the Punjab in April 1916. It operates under a Warden of Fisheries, under control of the Financial Commissioner. During the first three years the Department was almost entirely concerned with preliminary work, consisting largely of investigations and experiments in the Beas and Ravi Rivers.

These rivers were examined with a view to ascertain the indigenous species which inhabited them, their habits, spawning grounds and other data which would enable Government to frame regulations for their protection. The various fishing communities were interviewed and their views and statements carefully considered as to their rights in Government waters. Rules based upon the evidence when collated were subsequently drafted and approved by Government for the regulation of fishing in various districts, and are said to be working smoothly and satisfactorily. Those for each district take account of special local conditions, with a view both to conserve the fish supply and to secure a reasonable revenue to Government.

Trout culture flourishes in the hill streams, good sport being enjoyed by anglers in the Kulu Valley where operations were first initiated. The Kangra streams are now receiving attention, various consignments of ova having been sent there, successfully hatched out, and turned into suitable waters.

The Opium Trade.

Two descriptions of opium must be distinguished. *Bengal* opium which is manufactured from poppy grown in the United Provinces; and *Malwa* opium which is almost entirely produced in certain Native States in Central India and Rajputana.

Bengal Opium.—Cultivation of poppy is only permitted under license. The cultivator to whom advances are made by Government free of interest is required to sell the whole of his production to the Opium Factory at Ghazipur at a rate fixed by Government, now Rs. 7/8 per seer of 70° consistency. The area licensed for cultivation has in recent years been much reduced as a consequence of the agreement between the Government of India and the Chinese Government, and is now restricted to the United Provinces. The following are the figures of the area under cultivation and of production in 1917-18: Bighas cultivated, 331,216; Gross produce in Maunds, 32,321; number of chests manufactured, 25,146. At the Factory two classes of opium are manufactured:

(1) "Provision" opium intended for export to foreign countries. This opium is made up in balls or cakes, each weighing 3·5 lbs., 70 cakes weighing 140½ lbs. being packed in a chest.

(2) "Excise" opium intended for consumption in British India. This is made up in cubic packets, each weighing one seer, 60 packets being packed in one chest. It is of higher consistency than "provision" opium.

"Provision" opium is sold by public auction in Calcutta, the quantity to be sold being fixed by Government. This quantity has been reduced in recent years in accordance with the agreement with China, the figures being 15,440 chests in 1911 and 6,700 chests in 1912. Exports to China have been stopped altogether since 1913.

Malwa Opium.—The poppy from which Malwa opium is manufactured is grown chiefly in the Native States of Indore, Gwalior, Bhopal, Jaora, Dhar, Rutlam, Mewar and Kotah. The British Government has no concern with the cultivation of the poppy, or the manufacture of the opium; but it used to regulate, before exports to China were stopped, the import of Malwa opium into, and the transport through, its territories. As the chief market for Malwa opium was China, and as the States in which the drug is produced had no access to the sea, except through British territory, the British Government were able to impose a duty on the importation of the drug on its way to Bombay for exportation by sea.

No statistics of cultivation or production are available. The poppy is sown in November, the plants flower in February, and by the end of March the whole of the opium has been collected by the cultivators who sell the raw opium to the village bankers. It is then bought up by the large dealers who make it up into balls of about twelve ounces and store it until it is ready for export, usually in September or October. The opium is of 90° to 95° consistency and is packed in half chests: con-

siderable dryage took place in the case of new opium while transported to Bombay.

Sales of Malwa opium for export to China have ceased since January 1913 and the trade has become extinct since 17th December of that year when the last shipment was made. Practically the whole of the Malwa opium exported from Bombay went to China. There is no market for it in the Straits Settlements. A few chests annually are shipped to Zanzibar.

Revenue.—The revenue derived by the Government of India from opium in recent years is as follows:—

	£
1915-16	1,913,514
1916-17	3,160,005
1917-18	3,078,903
1918-19	3,229,000
1919-20 (Budget Estimate) ..	3,056,200

The estimated expenditure for the year 1919-20 is £ 1,046,100.

Agreement with China.—The fluctuations in the revenue derived from opium are directly attributable to the trade conditions arising out of the limitation of opium exports. In 1907 being satisfied of the genuineness of the efforts of the Chinese Government to suppress the habit of consuming opium in China, the Government of India agreed to co-operate by gradually restricting the amount of opium exported from India to China. In 1908 an arrangement was concluded by which the total quantity of opium exported from India was to be reduced annually by 5,100 chests from an assumed standard of 67,000 chests. Under a further agreement, signed in May 1911, the cessation of the trade was to be accelerated on evidence being shown of the suppression of the native production of opium in China, and in accordance with this agreement a further limitation was placed on exports to Chinese ports. The reduction of exports led to an increase in the price of the drug in China and a corresponding rise in the price obtained in India at the auction sales. For some considerable time, however, in 1912 the trade in China was paralysed by the imposition by Provincial Governors in defiance of instructions from the Central Government of restrictions on the importation and sale of Indian opium. Stocks accumulated rapidly at Shanghai and Hongkong and the position in December 1912 had become so acute that a strong and influential demand was made on the Government of India to relieve the situation by the suspension of sales. Sales were accordingly postponed both of Bengal and Malwa opium and in order to afford the Malwa trade the most complete relief, the Government of India undertook to purchase for its own use 11,253 chests of Malwa opium which remained to be exported in 1913. The present position is that the export trade to China has ceased since 1913. The exports of opium on private account amounted in 1917-18 to 12,000 cwts. valued at Rs. 240 lakhs. The importing countries, in order of importance, were Indo-China, Java, Siam, Japan, Hongkong and Straits Settlements.

GLASS AND GLASSWARE.

The total value of the glass and glassware imported into India in 1918-19 was Rs. 124 lakhs compared with the Rs. 162 in the preceding year and Rs. 161 lakhs the quinquennial average up to 1913-14. The imports of glassware in India were showing an upward increase, they being in 1913-14 over Rs. 190 lakhs in value, *i.e.*, over the quinquennial average. Austria-Hungary and Germany before the outbreak of the war exported bangles, beads, bottles, funnels, chimneys and globes, etc., to the values of Rs. 116 lakhs in 1913-14. The value of average imports from the enemy countries during the five pre-war years was Rs. 93 lakhs or about 57% of the trade. With their disappearance from the Indian market, imports from Japan have increased to 71% from 8%, the pre-war average. United Kingdom increased her shipments of sheet and plate glass, which before 1914 came largely from Belgium. Japan, however, could not meet the Indian demand, and hence renewed and pioneer efforts were made in India to partly satisfy the needs of the Indian consumer.

Manufacture of Glass in India.—Glass was manufactured in India in centuries before Christ and Pliny makes mention of "Indian Glass" as being of superior quality. As a result of recent archaeological explorations, a number of small crude glass vessels have been discovered indicative of the very primitive stage of the Industry. But no further traces of ancient Indian Glass Industry as such survive; yet, it is certain that by the sixteenth century it was an established Industry producing mainly bangles and small bottles. The quality of the material was inferior and the articles turned out were rough. Beyond this stage, the industry had not progressed until the nineties of the last century. Manufacture of glass in India on modern European lines dates from the nineties of the last Century, when some pioneer efforts were made in this line. Since then a number of concerns have been started, a number of them have failed, while some are still clinging to life owing to war conditions. They mainly devote themselves to the manufacture of bangles and lampware side by side with bottle-making on a small scale. This, therefore, is the criterion which determines the two well-defined classes of the Industry in its present stage, (i) indigenous Cottage Industry and (ii) the modern Factory Industry.

(i) The indigenous Cottage Industry which is represented in all parts of the country, but has its chief centres in Firozabad District of U. P., and Belgaum District, in the South, is mainly concerned with the manufacture of cheap bangles made from "glass cakes or blocks" made in larger Factories. The industry is at present in a flourishing state and supplies nearly one-third of the Indian demand for bangles. The quality has been improved by the discovery of new glazing processes and for the present the turnover in this line has gone up to 20 lakhs of rupees a year. But these bangles have now to face a very hard competition from Japan whose "silky" bangles are ousting the old-type Indian ones.

(ii) The modern Factory type of organization of this Industry is just in its infancy at present. The existing Factories either stop at producing glass cakes for bangle as in Firozabad or simple

kind of lampwares and bottles. With the existing state of knowledge and machinery in India they can neither produce sheet and plate glass, nor do they pretend to manufacture laboratory or table glass. Artistic glassware is out of question and the private capitalists who have to run their concerns mostly with commercial ends do not think worth their while to spend money and labour on it. War caused a great decrease in volume—though not so much in value which was much increased—of the imports of the lampware, etc., and in order to meet the Indian demand for them, new Factories were started and old revived, which produced only cheap and simple kind of lampware and bottles on small scale. The total production of these Indian Glass Works has not been exactly estimated, but it is generally supposed that they were able to meet in these war years nearly half the Indian demand for this kind of glassware. There are at present 14 Factories engaged in the production of lampware, of which two or three only produce bottles and carboys also. The chief centres for the former kind are Bombay, Jubbulpore, Allahabad, and Bijholi and Ambala; while bottles are only manufactured at Naini and Lahore, and recently at Calcutta.

During the latter years of the war period, a number of Glass Works have been opened in the Bombay Presidency and adjoining districts, local manufacture having been stimulated by the cessation of imports of German, Austrian and Belgian glass.

Causes of failure.—Records of the earlier ventures have shown that the failures in some cases were due in part at least to preventable causes, prominent among which were (1) Lack of enlightened management; (2) Lack of proper commercial basis, as in some cases the proprietors had a number of other more larger concerns to look to. (3) Bad selection of site. An ideal site for a Glass Factory would be determined by the (a) nearness of quartz and fire-clay, (b) nearness of fuel, and (c) by the nearness of market. At least two must be present. In some concerns, two were absent. (4) Specialisation was lacking, some factories in their initial stages trying to manufacture three or four different kinds of glassware simultaneously like lampware, bottles, and bangles etc. (5) Paucity of sufficient fluid capital for initial expenses for machinery or other improvements or even in some cases for running the concern in the beginning.

But beyond these there are certain real and special causes that contributed to the failure of some of these and hinder the progress of the rest. Chief among them are (1) The Industry is in its infant stage and hence such failures are but incidental. (2) No expert guidance in this line, there is a lack of men and good literature. (3) Paucity of skilled labour of higher type. The present Indian workmen in this line and blowers are few in number and illiterate. They, therefore, master the situation and are unamenable to management. (4) Heavy cost of good fuel, the works usually being situated where good sand and quartz can be obtained, and consequently, in most cases, at a great distance from the coal-fields. (5) To a certain extent, competition from Japan and other European countries.

Alkali used is almost entirely of English manufacture being Carbonate of Soda 98-99% in a powdered form. This Alkali has almost completely taken place of the various Alkaline Earths formerly employed by the Glass Bangle manufactures as the latter cannot be used in the manufacture of glass which is to compete with the imported article. These points must be carefully noted for future guidance.

The Industry has developed considerably under war conditions; but in peace times, in this transition stage, immediate efforts must be made in the direction of what the Indian Industrial Commission say in their Report (Appendix F.), viz: "The Glass Industry, even in its sim-

plest form is highly technical and can be efficiently carried on only by scientifically trained managers and expert workmen. The present stage has been reached by importing men, only partially equipped with the necessary qualifications, from Europe and Japan, and by sending Indian students abroad to pick up what knowledge they can. The glass industry is a closed trade and its secrets are carefully guarded, so that the latter method has not proved conspicuously successful."

BIBLIOGRAPHY.—Indian Industries Commission Report (Appendix); Indian Munitions Board, Industrial Handbook, etc.

WILD BIRDS' PLUMAGE.

The Bill for prohibiting the importation into England of wild birds' plumage, which was introduced into Parliament in 1913, was the occasion of a fierce controversy on the nature of the plumage traffic. But organised opposition to the Bill failed to convince the public that the plumage trade was not one of great cruelty. Among well-authenticated cases from India that prove its cruelty was one from Karachi, in 1913, in which two men were fined for sewing up the eyes of birds so that they should not fight in their cages. It was stated that this was a common practice of fishermen in Sind, who breed birds and export their feathers to England. This according to *The Times*, is not only another apparent example of the way in which the prohibition on the export of plumage from India is notoriously evaded by smuggling into the open market of England, but shows how easily abuses might arise under any system which gave a general sanction to feather-farming. All legitimate methods of breeding birds for their plumage can be safeguarded as definite exceptions under an Act prohibiting importation; and only the exclusion by law of all plumage not so specified can put England abreast of the United States and of her own daughter Dominions in the suppression of a barbarous industry.

Plumage birds.—The birds most killed on account of their plumage in India are paddy birds, kingfishers, bustards, junglefowl, egrets, pheasants, paroquets, peafowl, and hoopoes. Perhaps the most extensively killed in the past has been the Blue Jay (*Coracias Indica*). The smaller Egret is met with throughout India and Northern Burma. It is a pure white slim heron which develops during the breeding season a dorsal train of feathers, which elongates and becomes "decomposed" as it is expressed, that is to say, the barbs are separate and distinct from each other, thus forming the ornamental plume or aigrette for which these birds are much sought after and ruthlessly destroyed. Thirty years ago the exports were valued at over six lakhs in one year, but since 1895 the export trade has steadily diminished. But, though legitimate exports have been stopped, the trade is so lucrative as to lead to many attempts at smuggling. Within a recent period of 12 months the Bombay Preventive Department, for example, seized egret plumes worth Rs. 2,19,047 in India and £44,000 in London. The rupee value represents the sum which the exporters paid to those who took the feathers from the birds, so the loss to the trade was considerable. In addition,

penalties varying from Rs. 5,000 to Rs. 10,000 each and amounting altogether to Rs. 59,175 were inflicted on the ten merchants concerned in attempting to export the feathers. A case was reported from Rangoon in 1916 of a man being found in possession of 22 lbs. of egret feathers valued at Rs. 66,000.

Legislation.—Indian legislation on the subject will be studied with interest by those who have followed the course of legislation on this subject in other countries. Until 1887 no legislation was considered necessary in India. An Act of that year enabled local governments and municipal and cantonment authorities to make rules prohibiting under penalties the sale or possession of wild birds recently killed or taken during their breeding seasons, and the importation into any municipal or cantonment area of the plumage of any wild birds during those seasons; and local governments were empowered to apply these provisions to animals other than birds.

Afterwards, in 1902, action was taken under the Sea Customs Act to prohibit the exportation of the skins and feathers of birds, except feathers of ostriches and skins and feathers exported *bona fide* as specimens illustrative of natural history. Act VIII of 1912 goes much further than the previous law. It schedules a list of wild birds and animals to which the Act is to apply in the first instance, enables local governments to extend this list, empowers local governments to establish "close times," presumably during the breeding seasons, in the whole of their territories or in specified areas, for wild birds and animals to which the Act applies, and imposes penalties for the capture, sale, and purchase of birds and animals in contravention of the "close time" regulations, and for the sale, purchase and possession of plumage taken from birds during the close time. There is power to grant exemptions in the interests of scientific research, and there are savings for the capture or killing by any person of a wild animal in defence of himself or of any other person, and for the capture or killing of any wild bird or animal in *bona fide* defence of property.

One defect in the law may be noticed. When an exporter is discovered, the Customs Department can on a magistrate's warrant have his house searched and seize the feathers found there to produce as evidence that he is engaged in the trade. But they have to return the feathers and can only take possession of them if they are discovered presently in course of export.

BREWERIES.

Statistics compiled from official returns show that there were, in 1912, 22 **breweries** in British India, of which one did not work during the year. Fifteen of these are private property and seven are owned by six joint-stock companies with a nominal capital of Rs. 26,71,000, of which Rs. 22,26,260 was paid up at the end of 1912-13. Eight of the breweries are located at stations in the Himalayas from Murree to Darjeeling. The largest brewery is the one at Murree, the Bangalore, Solon, Rawalpindi, Kasauli, Poona, and Mandalay, breweries standing next in the order shown. In the pre-war year **production** was 3,654,000 gallons. This figure rose in 1918 to 8,214,000 gallons, an increase of 32 per cent, as compared with the

preceding year.

A substantial quantity of beer produced locally is consumed by the British troops in India. In 1907 the Army Commissariat purchased some 38 per cent. of the total production and the average purchases in the five years 1903-1907 amounted to 2,633,616 gallons yearly. From the 1st January, 1908, the contracts with Indian breweries for the supply of malt liquor to British troops have been discontinued, each British regiment being left free to make its own arrangements to obtain the necessary supply; as a result, the figures of Army consumption are no longer readily available.

GRAIN ELEVATORS.

The question of adopting elevators for the handling of Indian grain has engaged attention for some time and has assumed increased importance in the light of the railway congestion experienced in recent years and more particularly in the grain season. In the last three years great strides have been made by other countries in the adoption or perfecting of the elevator system, and a large mass of contemporary data on the subject has been brought together by the Commercial Intelligence Department. Since the subject is one that cannot receive adequate consideration in India till the facts are before the public, these have been embodied in a pamphlet entitled *Indian Wheat and Grain Elevators*, by the late Mr. F. Noel-Paton, Director General of Commercial Intelligence to the Government of India. The work gives full particulars regarding India's production of wheat, and shows that less than one-eighth of the crop is exported. It describes the conditions under which the grain is held and the risks that it runs. It is pointed

out that the cultivator has no adequate means of preserving his wheat and that he is constrained to sell at harvest time: also that the prices then obtained by him are considerably lower than those usually current in later months. The constant nature of the European demand is explained and an attempt is made to gauge the probability that the enormously increased quantities of wheat to be expected when new irrigation tracts come into bearing would be accepted by Europe at one time and at a good price, or could be economically transported under a system in which a few months of congestion alternated with a longer period of stagnation. Figures are given which suggest that in practice the effect of equipping railways to do this is to intensify the evil and so to engage in a vicious circle. The author explains the structural nature of elevators and their functions as constituted in other countries. Particulars are given as to the laws that govern their operations in such countries.

TRADE MARKS.

The **Indian Merchandise Marks Act** (IV of 1889) was passed in 1889, but its operation in the earlier years was restricted, especially in Calcutta, in consequence of the lack of adequate Customs machinery for the examination of goods. In 1894, with the introduction of the present tariff, the Customs staff was strengthened for the examination of goods for assessment to duty, and this increase enabled examination to be made at the same time for the purposes of the Merchandise Marks Act. The Act was intended originally to prevent the fraudulent sale of goods bearing false trade marks or false trade descriptions (as of origin, quality, weight, or quantity). While the Act was before the Legislature a provision was added to require that piece-goods should be stamped with their length in yards. In this respect these goods are an exception, for the Act does not require that other descriptions of goods should be stamped or marked, though it requires that when goods are marked the marks must be a correct description. The number of deten-

tions under the Act during the twenty years ending 1912-13 has been:—

Average of the five years

ending	..	..	1897-98	1,386
"	"	"	1902-03	1,411
"	"	"	1907-08	1,198
"	"	"	1912-13	1,960

Detention is but rarely followed by confiscation, and there have been only 109 such cases during the stated twenty years. Usually, detained goods are released with a fine, and this procedure was followed in 19,282 cases out of the 29,774 detentions ordered in the same period. In 10,364 cases the detained goods were released without the infliction of a fine. In this period of twenty years 42 per cent. of the detentions were on account of the application of false trade marks or false trade descriptions. In 36 per cent. of the cases detention was ordered because the country of origin was either not stated or was falsely stated, and in 21 per cent. because the provisions of the Act for the stamping of piece-goods had been infringed.

HIDES, SKINS AND LEATHER.

India's local manufactures of skins and leather have steadily increased in recent years. Previous to the outbreak of war, the trade in raw hides in this country was good; there was a large demand for hides, and prices ruled high. While in the continental markets stocks were high owing to overtrading in the previous year, the United States had a shortage which was estimated at approximately two million pieces. On the declaration of war, the trade which had up till then been brisk was seriously dislocated. Exports to enemy countries, especially to the great emporium of Indian hides, Hamburg, were stopped, and exporters had to find new markets for the raw material. The raw hide business of India, it is well known, has hitherto been largely, if not quite entirely, in the hands of German firms or firms of German origin. Germany has had the largest share of India's raw hides. In the four months before the outbreak of war she took 39 per cent. of the total exports. In 1912-13 she took 32 per cent. and in 1913-14, 35 per cent. Raw hides were exported to Trieste in considerable quantities whence they were taken to Germany or Austria. In the four months before the outbreak of war 15 per cent. of India's exports passed through Trieste; in 1913-14 the percentage was 21.

Conditions of the Trade.—The trade in hides and skins and the craft in leather manufacture are in the hands either of Mahomedans or of low caste Hindus, and are on that account participated in by a comparatively small community. The traffic is subject to considerable fluctuations concomitant with the vicissitudes of the seasons. In famine years for instance the exports of untanned hides rise to an abnormal figure. The traffic is also peculiarly affected by the difficulty of obtaining capital and by the religious objection which assigns it to a position of degradation and neglect; it has thus become a monopoly within a restricted community and suffers from the loss of competition and popular interest and favour.

No large industry has changed more rapidly and completely than that of leather. By the **chrome process**, for example, superior leather may be produced from the strongest buffalo hides in seven days, from cowhide in twenty-four hours, and from sheep and goat skins in six to eight hours; and these operations formerly took thirty days or as much as eighteen months. Of these changes the native tanners of India were slow to take advantage, but in spite of general backwardness the leather produced by some of the tanneries, especially those under European management, is in certain respects equal to the best imported articles. But since the outbreak of war progress has been more rapid and considerable quantities of special forms of chrome leather, for which Indian hides are particularly suitable, have found a ready market in London.

Protecting the industry.—The report of the Industrial Commission pointed out that

the principal difficulty at present in the hides and leather industry was the lack of organisation and expert skill. Government action to foster the industry was first taken in September 1919, when a Bill was introduced in the Imperial Legislative Council further to amend the Indian Tariff Act, 1894. The effect of this Bill was officially described as follows: "It is to impose an export duty of 15 per cent on hides and skins with a rebate of 10 per cent on hides and skins exported to other parts of the Empire, and there tanned. Its object is to ensure that our hides and skins shall be converted into fully tanned leather or articles of leather so far as possible in India and failing this in other parts of the Empire, instead of being exported in a raw state for manufacture in foreign countries." Sir George Barnes who was in charge of the Bill and described the tanning industry as one of the most promising Indian industries explained that "the present position is that we have in India at the present time some hundreds of tanneries for the tanning of hides, a large number of which have come into existence in order to satisfy military requirements during the war. We have in fact the foundations of a flourishing tanning industry, but there is reason to fear that it may tend to dwindle and disappear with the diminution of military requirements, if some other support is not given. We want to keep this industry alive, and we believe that in this case protection in the shape of a 15 per cent export duty is justifiable and ought to be effective. It is clearly just also that the same measure of protection should be extended to the tanners of skins whose business, as I have already stated, was injured by the necessities of the war. Though Indian tanneries have enormously increased in number during the past three years, they can only deal with a comparatively small proportion of the raw hides and skins which India produces, and it is to the advantage of India and the security of the Empire generally that this large surplus should, so far as possible, be tanned within the Empire, and with this end in view the Bill proposes a 10 per cent rebate in respect of hides and skins exported to any place within the Empire. I should add that it is proposed to limit by notification the benefit of this rebate to hides and skins actually tanned within the Empire; and Indian hides and skins re-exported from an Empire port for the purpose of being tanned abroad will not be entitled to any rebate."

Indigenous methods.—India possesses a large selection of excellent tanning materials such as Acacia pods and bark, Indian sumach, the Tanner's cassia, Mangroves, and Myrabolans. By these and such like materials and by various methods and contrivances, hides and skins are extensively cured and tanned and the leather worked up in response to an immense, though purely local, demand. But the inferior quality of the leather so used by effect methods may be illustrated by the fact that the articles produced rarely fetch much more than one-fourth the value of the corresponding articles made of imported or Cawnpore (European factory) leather.

Trade of 1918-19.—The quantity of **raw hides** exported was 19,100 tons. Seventy-four per cent of these exports was raw cowhides which decreased to 14,200 tons, from 15,900 tons in 1917-18, and 37,200 tons in the pre-war year 1913-14. The decrease in exports is accounted for by the prohibition which existed on certain classes of raw hides until April, 1919 and partly by the great increase in the tanning of cowhides in India for army purposes, and partly by the great scarcity and cost of freight which limited the export of inferior quality of hides. The largest shipments were to the United Kingdom (8,600 tons) and to Italy (4,700 tons). The quantity of raw buffalo hides exported (3,900 tons) was 7 per cent. below that of 1917-18. The United Kingdom had the largest share of these exports, with 2,200 tons or 55 per cent. of the total, as against 1,400 tons or 34 per cent in the preceding year. The United States, the biggest buyer in previous years, came next after the United Kingdom with 1,300 tons.

The exports of **raw skins** were 25,000 tons, an increase of 12 per cent over the previous year. Nearly three-fourths of the total exports went to the United States. The shipments to the United Kingdom decreased by 24 per

cent, while those to France, Canada, and Japan increased. Eighty-five per cent of the total quantity of raw skins exported consisted of raw goat skins.

Tanned hides were exported to the extent of 25,500 tons, an increase of 39 per cent as against the preceding year, and of more than 180 per cent above the pre-war quinquennial average. Almost the entire quantity (99·6 per cent) was shipped to the United Kingdom. Tanned cowhides were 25,000 tons or 98 per cent. of the exports of tanned hides, as against 17,300 tons in 1917-18. The quantity shipped in the pre-war year 1913-14 was 7,900 tons only. Indian tanned hides are supplied to Cawnpore for Army Work in India and there has in this and similar ways been an increase in the local consumption of these hides.

Exports of **tanned skins** were 3,000 tons, an increase of 75 per cent. over the previous year. This was due to the fact that exports have been permitted under license since September, 1918. The quantity shipped to the United Kingdom was 2,300 tons as against 1,200 tons in 1917-18. The remainder was purchased mainly by the United States (460 tons) and Japan (150 tons).

INVENTIONS AND DESIGNS.

A handbook to the **Patent Office** in India, which was published in 1916 by the Government Press, Calcutta, gives the various Acts, rules, and instructions bearing on the subject together with hints for the preparation of specifications and drawings, hints for searchers and other valuable information that has not hitherto been readily accessible to the general public in so convenient a form. In the preface Mr. H. G. Graves, Controller of Patents and Designs, explains the scope of the Patent laws in India and indicates wherein they differ from English law and procedure.

The foundation of patent legislation throughout the world lies in the English "Statute of Monopolies" which was enacted in 1623, the 21st year of King James the First. In part this Act has been repealed but the extant portion of the more important section 6 is as follows:—"Provided also that any declaration before mentioned shall not extend to any letters patent and grants of privilege for the term of fourteen years or under, hereafter to be made of the sole working or making of any manner of new manufactures within this realm to the true and first inventor and inventors of such manufactures, which others at the time of making of such letters patent and grants shall not use, so as also they be not contrary to the law nor mischievous to the State by raising prices of commodities at home, or hurt of trade, or generally inconvenient; the said fourteen years to be accomplished from the date of the first letters patent or grants of such privilege hereafter to be made, but that the same shall be of such force as they should be if this Act had never been made, and of none other."

The existing Indian patent law is contained in the Indian Patents and Designs Act, 1911, supplemented by the Indian Patents

and Designs (Temporary Rules) Act, 1915, and by the Rules made under those Acts. The Patent Office does not deal with trade marks or with copyright generally in books, pictures, music and other matters which fall under the Indian Copyright Act III of 1914. There is, in fact, no provision of law in British India for the registration of Trade Marks which are protected under the Merchandise Marks Act (IV of 1889) which forms Chapter XVIII of the Indian Penal Code.

On the whole, Indian law and procedure closely follow that in the United Kingdom for the protection of inventions and the registration of designs, as they always have done in matters of major interest. One main difference exists, however, as owing to the absence of provision of law for the **registration of trade marks**, India cannot become a party to the International Convention under which certain rights of priority are obtainable in other countries.

The first Indian Act for granting exclusive privileges to inventors was passed in 1856, after an agitation that had been carried on fitfully for some twenty years. Difficulties arising from an uncertainty as to the effect of the Royal Prerogative prevented earlier action, and, owing to some informalities the Act itself was repealed in the following year. In 1859 it was re-enacted with modifications, and in 1872 the Patterns and Designs Protection Act was passed. The protection of Inventions Act of 1883, dealing with exhibitions, followed, and then the Inventions and Designs Act of 1888. All these are now replaced by the present Act of 1911.

The existing Acts extend to the whole of British India, including British Baluchistan and the Santhal Parganas. This of course includes Burma but it does not embrace the Native

States. Of the latter three, *viz.*, (1) Hyderabad (Deccan), (2) Mysore, (3) Gwalior have ordinances of their own, for which particulars must be obtained from the Government of the States in question as they are not administered by the Indian Patent Office in Calcutta. The object of the Act of 1911 was to provide a simpler, more direct, and more effective procedure in regard both to the grant of patent rights and to their subsequent existence and operation. The changes made in the law need not here be referred to in detail. They gave further protection both to the inventor, by providing that his application should be kept secret until acceptance, and to the public, by increasing the facilities for opposition at an effective period. At the same time a Controller of Patents and Designs was established, with power to dispose of many matters previously referred to the Governor-General in Council, and provision was made for the grant of a sealed "patent" instead of for the mere recognition of an "exclusive privilege." The provisions of the Act follow with the necessary modifications those of the British Inventions and Designs Act of 1907.

The **annual report** of the Indian Patents' Office for the calendar year 1916 states that four hundred and forty-two applications for patents and 1,773 applications to register designs were made in 1916 as compared with 445 and 904 respectively in 1915. The income of the office increased from Rs. 69,760-3 in 1915 to Rs. 77,608-13 in 1916. Figures for previous years are published in the Report. Mr. Graves, the Comptroller, remarks that if the natural increase of pre-war conditions had been continued, there would have been about 800 applications for patents and an income of over Rs. 80,000. Apart from the falling-off in applications, the war does not appear to have made any material change in the nature of inventions in this country where the novel necessities of the moment are not apparent and cannot therefore be supplied by would-be patentees. Altogether 2,649 patents were in force on 31st December 1916. These include 1,814 patents out of 2,108 sealed on 2,858 applications under the Indian Patents and Designs Act, 1911, together with 65 of the 148 patents converted under section 81 of that Act. The balance 770 consists of exclusive privileges remaining under the Inventions and Designs Act, 1888.

Applications for patent by enemy subject are permitted, but as a rule are held in suspense and the sealing of patents on their applications is not affected for the present. Patents in existence are, however, renewable at the option of the holder even if he be an enemy as it is not considered desirable that the property therein should be destroyed.

It can, however, be alienated or utilised for the benefit of the public on application. Provision for these proceedings is made by a License Act, and rules introduced after the year. In their main lines the License Act and rules follow the practice in the United Kingdom. They enable the controller to deal with patents held by enemy subjects and remove the disabilities under which any person may suffer in respect of patents or designs owing to the present state of the war.

Printed Specification of applications for patents, which have been accepted (8 annas per copy), may be seen free of charge, together with other publications of the Patent Office at the following places:—

AHMEDABAD	.. R. C. Technical Institute.
ALLAHABAD	.. Public Library.
BANGALORE	.. Indian Institute of Science.
BOMBAY	.. Record Office.
"	.. Victoria Jubilee Technical Institute, Byculla.
"	.. The Bombay Textile and Engineering Association, No. 1A, Sussex Road, Parel.
CALCUTTA	.. Patent Office, No. 1, Council House Street.
"	.. Civil Engineering College, Sibpur.
CAWNPORE	.. Office of the Director of Industries, United Provinces.
CHINSURAH	.. Office of the Commissioner, Burdwan Division.
CHITTAGONG	.. Office of the Commissioner, Chittagong Division.
DACCA	.. Office of the District Board, Dacca.
DELHI	.. Office of the Deputy Commissioner.
HYDERABAD	.. Revenue Department of His Highness the Nizami's Government.
JALPAIGURI	.. Office of the Commissioner, Rajshahi Division.
KARACHI	.. Office of the City Deputy Collector.
LAHORE	.. Punjab Public Library.
LONDON	.. The Patent Office, 25, Southampton Buildings, W. C.
MADRAS	.. Record Office, Egmore.
"	.. College of Engineering.
MYSOORE	.. Office of the Secretary to Government, General and Revenue Department.
NAGPUR	.. Victoria Technical Institute.
POONA	.. College of Engineering.
RANGOON	.. Office of the Revenue Secretary, Government of Burma.
ROORKEE	.. Thomas College.
SHOLAPUR	.. Office of the Collector.

Coinage, Weights and Measures.

As the currency of India is based upon the rupee, statements with regard to money are generally expressed in rupees, nor has it been found possible in all cases to add a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2s., or one-tenth of a £, and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000=£100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1s. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise the exchange value of the rupee to 1s. 4d., and then introduce a gold standard at the rate of Rs. 15=£1. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1s. 4d., and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000=£100— $\frac{1}{3}$ =(about) £67.

Notation.—Another matter in connection with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A **lakh** is one hundred thousand (written out as 1,00,000), and a **crore** is one hundred lakh or ten millions (written out as 1,00,00,000). Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899, while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

Coinage.—Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both Natives and Europeans. The anna was formerly reckoned as 1½d., it may now be considered as exactly corresponding to 1d. The anna is again sub-divided into 12 pies.

Weights.—The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras

and Bombay, may be thus expressed one maund 40 seers, one seer=16 chittaks or 80 tolas. The actual weight of a seer varies greatly from District to District, and even from village to village, but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. The standard is used in official reports.

Retail.—For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change what varies is not the amount of money to be paid for the same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops, where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumption that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1s. 4d., 1 seer per rupee=(about) 3 lb. for 2s., 2 seers per rupee=(about) 6 lb. for 2s., and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have been expressed in this work either in square miles or in acres.

Proposed reforms.—Indian weights and measures have never been settled upon an organised basis suitable for commerce and trade characteristic of the modern age. They vary from town to town and village to village in a way that could only work satisfactorily so long as the dealings of towns and villages were self-contained and before roads and railways opened up trade between one and the other. It is pointed out that in England a hogshead of wine contains 63 gallons and a hogshead of beer only 54 gallons; that a bushel of corn weighs 46 lbs. in Sunderland and 240 lbs. in Cornwall; that the English stone weight represents 14 lbs. in popular estimation, but only 5 lbs., if we are weighing glass, and eight for meat, but 6 lbs. for cheese. Similar instances are multiplied in India by at least as many times as India is bigger than England. If we take, for instance, the maund denomination of weight common all over India, we shall find that in a given city there are nearly as many maunds as there are articles to weigh. If we consider the maund as between district and district the state of affairs is worse. Thus in the United Provinces alone, the maund of sugar weighs 48½ seers in Cawnpore, 40 in Muttra, 72½ in Gorakhpur, 40 in Agra, 50 in Moradabad, 43½ in Saharanpur, 50 in Bareilly, 46 in Fyzabad, 48½ in Shah-jehanpur, 51 in Goshangunge. The maund

varies throughout all India from the Bengal or railway maund of 82-2/7 lbs. to the Factory maund of 74 lbs. 10oz. 11drs., the Bombay maund of 28 lbs., which apparently answers to the Forest Department maund in use at the Fuel Depot, and the Madras maund, which some authorities estimate at 25 lbs. and others at 24 lbs. and so on.

Committees of Inquiry.—These are merely typical instances which are multiplied indefinitely. There are variations of every detail of weights and measures in every part of India. The losses to trade arising from the confusion and the trouble which this state of things causes are heavy. Municipal and commercial bodies are continually returning to the problem with a view to devising a practical scheme of reform. The Supreme and Provincial Governments have made various attempts during 40 years past to solve the problem of universal units of weights and measures and commerce and trade have agitated about the question for the past century. The Indian railways and Government departments adopted a standard tola (180 grains), seer (80 tolas) and maund (40 seers) and it was hoped that this would act as a successful "lead" which would gradually be followed by trade throughout the empire, but the expectation has not been realised.

The Government of India considered the whole question in consultation with the provincial Governments in 1890-1894 and various special steps have at different times been taken in different parts of India. The Government of Bombay appointed a committee in 1911 to make proposals for reform for the Bombay Presidency. Their final report has not been published, but they presented in 1912 an *ad interim* report which has been issued for public discussion. In brief, it points out the practical impossibility of proceeding by compulsory measures affecting the whole of India. The Committee stated that over the greater part of the Bombay Presidency a standard of weights and measures would be heartily welcome by the people. They thought that legislation compulsorily applied over large areas subject to many diverse conditions of trade and social life would not result in bringing about the desired reform so successfully as a "lead" supplied by local legislation based on practical experience. The want of coherence, *savoir faire*, or the means of co-operation among the people at large pointed to this conclusion. The Committee pointed out that a good example of the results that will follow a good lead is apparent in the East Khandesh District of the Presidency, where the District Officer, Mr. Simcox, gradually, during the course of three years, induced the people to adopt throughout the district uniform weights and measures, the unit of weight in this case being a tola of 180 grains. But the committee abstained from recommending that the same weights and measures should be adopted over the whole Presidency, preferring that a new system started in any area should be as nearly as possible similar to the best system already prevailing there.

Proposals from England.—Suggestions have been made by the British Weights and

Measures Association and the Decimal Association, respectively, at different times that British weights and measures and the decimal system should be introduced. Both proposals fail to meet the special requirements set forth by the Bombay Committee. Variations of them which have been put forward by different bodies in India in recent years are that the English pound weight and the English hundred-weight should be adopted as the unit of weight for all India. The argument in favour of the importation of an outside unit in this manner is that people in India will always associate with a given, familiar denomination of weight or measure the value they have been accustomed to consider in regard to it, but that if a new weight were introduced they would learn to use it in dealing with their neighbours, without the interference of anything resembling prejudice at what they might regard as an attempt to tamper with their old, traditional standards of dealing.

Committee of 1913.—The whole problem was again brought under special consideration by the Government of India in October, 1913, when the following committee was appointed to inquire into the entire subject anew:—

Mr. C. A. Silberrard (*President*).

Mr. A. Y. G. Campbell.

Mr. Rustomji Fardoonji.

This Committee reported, in August, 1915, in favour of a uniform system of weights to be adopted in India based on the 180 grain tola. The report says:—Of all such systems there is no doubt that the most widespread and best known is that known as the Bengal or Indian Railway weights. The introduction of this system involves a more or less considerable change of system in parts of the United Provinces (Gorakhpur, Bareilly and neighbouring areas), practically the whole of Madras, parts of the Punjab (rural portions of Amritsar and neighbouring districts), of Bombay (South Bombay, Bombay city and Gujarat), and the North West Frontier Province. Burma has at present a separate system of its own which the committee think it should be permitted to retain. The systems recommended are:—

FOR INDIA.

8 khaskhas	= 1 chawal
8 chawals	= 1 ratti
8 rattis	= 1 masha
12 mashes or 4 tanks	= 1 tola
5 tolas	= 1 chatak
16 chataks	= 1 seer
40 seers	= 1 maund

FOR BURMA.

2 small ywes	= 1 large ywe
4 large ywes	= 1 pe
2 pes	= 1 mu
5 pes or 2½ mus	= 1 mat
1 mat	= 1 ngamu
2 ngamus	= 1 tikal
100 tikals	= 1 peiktha or viss.

The tola is the tola of 180 grains, equal to the rupee weight. The viss has recently been fixed at 3' 60 lbs. or 140 tolas.

The recommendations of the Commission met with general approval and have been referred to the Provincial Governments for their consideration.

Legislation and Inspection.

The conditions of factory labour until 1913 were regulated by the Indian Factories Act of 1881, as amended in 1891. The chief provisions of the amended Act were Local Governments were empowered to appoint inspectors of factories, and certifying surgeons to certify as to the age of children. A mid-day stoppage of work was prescribed in all factories, except those worked on an approved system of shifts, and Sunday labour was prohibited, subject to certain exceptions. The hours of employment for women were limited to 11, with intervals of rest amounting to at least an hour and a half; their employment between 8 p.m. and 5 a.m. was prohibited, as a general rule, except in factories worked by shifts. The hours of work for children (defined as persons below the age of 14) were limited to seven, and their employment at night time was forbidden; children below the age of nine were not to be employed. Provision was made for the fencing of machinery and for the promulgation of rules as to water supply, ventilation, the prevention of overcrowding, etc.

Act of 1911.

The decision to undertake further legislation was arrived at after comprehensive inquiries. An important factor in the case was the increasing use of electric light in the Bombay Mills, which radically changed the conditions prevailing when the Act of 1891 was passed and had abolished the security that operatives would not be employed for more than 12 hours a day on the average. The question of the hours of employment in textile factories was brought into prominence by the period of prosperity that the cotton industry began to enjoy in the cold weather of 1904-05, a large number of persons operatives being regularly worked for 15 hours a day or even longer.

Owing to complaints regarding the long hours worked in many mills, the Government of India in 1906 appointed a small Committee with Commander Sir H. P. Freer-Smith, R.N., late Superintending Inspector for Dangerous Trades in England, as chairman, to conduct a preliminary inquiry into the conditions of labour in textile factories. The Committee recommended that the working hours of adult males should be limited to 12 hours a day; that certificates of age and physical fitness should be required prior to half-time employment and prior to employment as an adult; that night work of women should be prohibited; and that whole-time Medical Inspectors should be appointed.

The conclusions of this Committee formed the basis of an investigation, extending to all factories in India, by a representative Commission. This report disclosed the existence of abuses, particularly in connection with the employment of children, and the excessive hours worked by operatives generally in textile factories. The majority of the Commission deprecated a statutory limitation of the working hours of male adults. But they recommended the formation of a class of "young persons" between 14 and 17 years of age, whose hours should be limited to 12, and con-

sidered that this would indirectly secure a 12 hours' day for male adults. They also recommended that the hours of work for children should be reduced from 7 to 6 hours and that the hours for women should be assimilated to those for "young persons," night work being prohibited for both classes. They recommended that children should be certified as to age and physical fitness.

Hours fixed.

The recommendations of the Committee and of the Commission having been considered by the Government of India and the Local Governments, a Bill was introduced in July 1908 to amend and consolidate the law relating to factories, and was finally passed into law as Act XII of 1911.

The new Act extended the definition of "factory" so as to include seasonal factories working for less than four months in the year; shortened the hours within which children (and, as a general rule, women) may be employed, and further restricted the employment of women by night by allowing it only in the case of cotton-ginning and pressing factories. It also contained a number of new provisions for securing the health and safety of the operatives, making inspection more effective, and securing generally the better administration of the Act. The most important feature of the Act, however, was the introduction of a number of special provisions applicable only to textile factories. The report of the Factory Commission showed that excessive hours were not worked except in textile factories. The Act for the first time applied a statutory restriction to the hours of employment of adult males by laying down that, subject to certain exceptions, "no person shall be employed in any textile factory for more than twelve hours in any one day." It is also provided in the case of textile factories that no child may be employed for more than six hours in any one day, and that (subject to certain exceptions, among which are factories worked in accordance with an approved system of shifts) no person may be employed before 5-30 a.m. or after 7 p.m. (the new limits laid down generally for the employment of women and children). Corresponding limitations are placed on the period for which mechanical or electrical power may be used.

Factory Inspection.

The inquiries of the Factory Commission showed that the then existing system of factory inspection had not sufficed to prevent widespread evasion of the provisions of the factory law. This result was attributed to the fact that the number of full-time factory inspectors was very small, the work of inspection being to a large extent in the hands of ex-officio inspectors (District Magistrates, Civil Surgeons, etc.), who, as the Commission reported, had neither the time nor the special knowledge necessary for the work. In Bombay Presidency, where there were three special inspectors, it was reported that the Act was on the whole, well enforced. Steps have been taken since to reorganise the staff of whole-time inspectors of factories in India and to

increase it to a strength sufficient to cope with the work of inspecting all the factories in India. The total strength of the staff is now 14, as compared with 6 at the time of the Factory Commission's report. Each of the larger provinces has at least one inspector, Bombay having five. Except that in a few cases these officers have duties also in connection with

boiler inspection, their whole time is given to factory inspection. The District Magistrate remains an inspector, ex-officio, under the new Act, and other officers may be appointed additional inspectors, but it is contemplated that inspection by ex-officio inspectors will be to a large extent discontinued, or limited to special cases.

Life Insurance.

There are no publications from which a complete statistical survey of the various branches of insurance work in India can be obtained, but the official "Abstracts of Accounts and Valuation Statements in respect of Life Assurance Companies doing business in British India," published by the Government of India, give much information in regard to the 74 Life Assurance Companies subject to all the provisions of the Indian Life Assurance Companies Act, 1912, and some of those which are partially exempt from the Indian Act on the ground that they carry on business in the United Kingdom and comply with the provisions of the British Assurance Companies Act of 1909. It should be noticed that the various pension funds connected with Government services are exempt from compliance with the Indian Act.

The oldest of the Indian Companies were established in Madras about 80 years ago: Bombay has none older than the Bombay Mutual, the Oriental and the Bombay Widows' Pension Fund which were established about 40 years ago. Life Assurance seems not to have been started in Bengal until much later, and it was not until 1906 that many Companies were established either in that Presidency or elsewhere in India. The year 1919 was marked by the formation of several new companies, more particularly in Bombay.

In his introductory note to the official publication already mentioned, Mr. H. G. W. Meikle, Actuary to the Government of India, dealing with the year 1918, says:—

The total sums falling due under claims by death were considerably greater than in the previous year; these amounted to 55 lakhs in 1918, as compared with 34½ lakhs in 1917. The increase has been ascribed by most of the companies to the virulent influenza epidemic which swept over India during the latter half of the last year.

Indian Life Assurance Companies were mainly affected by the War in a fall in new business, a depreciation of securities and an increased rate of interest obtainable under new investments. The extra mortality due to war scarcely affected them as very few policies were issued by them to combatant officers and men at the front.

As to the fall in new business, it was satisfactory to find in the returns for 1917 already a marked recovery. The other effects will probably last for some time and act beneficially in the case of the existing companies which have withstood the financial crisis brought about by the war.

The amount written off to **depreciation** or transferred to the Investment Reserve Fund for the purpose of meeting the decreased value of securities has since the outbreak of war been over 1½ crores, but notwithstanding this the total amount of the Life Assurance Funds shows an increase each year and is now nearly 40 per cent. greater than it was when the Indian Life Assurance Companies Act came into force in 1912. Although the decrease in the value of the securities may make it seem prudent in some cases not to pay any bonus or dividend, the fact that securities stand at a low price has the effect of forming a contingent reserve fund, and a company's financial position will be all the stronger in future years for any prudent action which may be taken now. The income in most cases exceeds the company's outgo and, consequently, there is seldom any question of the securities having to be realised at the present low prices. Moreover, in the case of Indian companies, they consist mainly of Indian Government securities; hence no question arises of any decrease in the interest income.

Income Tax—Life Assurance Companies in India are now assessed for income tax on the basis of their profits as ascertained by actuarial investigations; if the total tax deducted at the source from interest on investments exceeds the tax calculated on profits, a refund is admissible to them of the difference. In the United Kingdom, income-tax is payable on the interest income after deduction of the amount of the expenses—subject to the proviso that it shall not be less than that on profits. Life Assurance Companies in the United Kingdom, as well as elsewhere, have been contending for a long time that the only fair basis on which they ought to be taxed is their profits; Indian Life Assurance Companies should consider themselves fortunate that they have already got this generous treatment from Government.

Actuarial Valuations.—Up till now 37 of the Indian companies have submitted the results of actuarial valuations of their assets and liabilities. Eighteen of these valuations disclosed a surplus. In 11 of the remaining nineteen, the deficit was covered by the paid-up capital, thus proving solvency but precluding the payment of either bonus or dividend. In six cases solvency was restored by reduction of sums assured or by calling up further capital. In two cases the degree of insolvency necessitated the winding up of the concern. Many of the other companies which went into liquidation without an actuarial valuation being made, adopted this course as the unsoundness of their financial position could be clearly demonstrated without it.

Mutual Companies.—With two exceptions, all the Indian companies shown as established within the last 25 years are proprietary companies with a share capital; but of the older companies, the great majority are mutual companies. These mutual companies generally have very small funds and it is found that payment of the full deposit prescribed in section 4 of the Life Act sometimes presses unduly on their resources, and as payment of the full deposit also interferes with the formation of new mutual companies, Government will be prepared to consider any application from an Indian mutual company for permission to pay a smaller deposit.

Since the passing of the Life Act nineteen Indian Life Assurance Companies have gone into **liquidation**. This was rendered necessary in the majority of the cases by financial difficulties brought about by insurance business having been transacted on the dividing principle.

In the following list the names of the existing Indian Life Assurance Companies have been arranged according to their respective dates of establishment as also with reference to the Province in which the Head Office of each is now situated.

Year when established.	Madras Presidency.	Bombay Presidency.	Bengal.	Punjab.	United Provinces, Assam, Ajmer, Merwara and Civil and Military Station of Bangalore.
1829 ..	*Madras Equitable ..	.....	....	....	....
1833 ..	*Madras Widows ..	.....	....	....	....
1847 ..	....	.....	....	*Christian Mutual.	....
1849 ..	*Tinnevely Widows.	.....	....	....	....
1871 ..	....	* Bombay Mutual ..	....	....	....
1874 ..	....	Oriental ..	....	....	....
1876 ..	....	* Bombay Widows ..	....	....	....
1884 ..	*Indian Christian.	.....	....	....	....
1885 ..	....	* Goan Mutual ..	....	....	....
1886 ..	....	.....	....	....	....
1887 ..	....	.....	....	....	....

* Mutual Companies.

Under this system the sums assured is not fixed but depends each year on a division of a portion of the premium income amongst the policies which have become claims; usually the premium is the same for all ages at entry and there is no medical examination.

Business other than Life Assurance.

Since the Life Act was passed in 1912, there has been a considerable reduction in the number of Indian companies transacting other classes of business in addition to life assurance, the number having decreased from twenty-one to the nine noted below:—

1. All India United which transacts Fire and Marine Insurance.

2. Bharat which transacts Fidelity Guarantee Insurance.

3. Empire, which transacts Fidelity Guarantee Insurance.

4. National, which transacts Fidelity Guarantee Insurance.

5. National Indian which transacts Fidelity Guarantee Insurance.

6. Rechabites, which transacts Sickness Insurance.

7. Hindustan of Gujranwala, which transacts Marriage Insurance.

8. Sind Hindu Provident, which transacts Marriage Insurance.

9. Christian Mutual, which transacts Capital Redemption business.

Some of the recently formed Life Assurance Companies, are taking up Fire and Marine insurance.

List of the existing Indian Life Assurance Companies—*contd.*

Year when established.	Madras Presidency.	Bombay Presidency.	Bengal.	Punjab.	United Provinces, Assam, Ajmer-Merwara and Civil and Military Station of Bangalore.
1888 ..	*Mangalore R. C.	* B. B. and C. I. Zoron.	....	....	....
1889	* Bombay Zoroastrian ..	....	....	....
1890
1891	* Gujarat Zoron. ..	*Hindu Mutual.	....	....
1892	Indian Life .. ..	....	....	....
1893	*Punjab Mutual	*Rechabites (U. P.)
1894	* Sind Hindu .. ..	....	....	....
1895
1896	Empire of India .. ..	....	Bharat ..	....
1897
1898
1899
1900
1901	*Simla Mutual.	....
1902
1903
1904
1905
1906 ..	United India	All India United ..	National Indian National.	Co-operative ..	....
1907	Hindustan Co-operative.	....	....
1908	Bombay Life	India Equitable.	Hindustan Benefit.	General (Ajmer)
1909
1910	Bengal Mercantile.	Popular ..	Aryya (Assam) *All India and Burma (Bangalore).
1911	Asian Commercial ..	....	....	....
1912	Unique ..	....	....
1913	Industrial and Prudential; Western India; East and West.	Light of Asia; Provincial.	....	....
1914	British India ..	....
1915
1916	Zenith .. ..	....	....	....
1917	Britannia .. ..	....	....	....
1918	India Allied.
1919	New India .. ..	....	....	....
1919	New Era; Bombay City.	Himalaya ..	....	....

* Mutual Companies.

Statistical information.—The new sums assured by Indian companies under ordinary life assurance policies during the year 1918 show a considerable increase, the total amount

being nearly 2½ crores as against 2¼ crores in the last year, and as against one crore and ninety lakhs in each of the two previous years.

Whole Life policies were issued last year for	20 lakhs, or	7.0 of the total.
Limited Payment policies " "	23 "	8.1 "
Endowment Assurance policies " "	233 "	81.7 "
Children's Endowments " "	6 "	2.1 "
Other classes of policies " "	3 "	1.1 "
Total ..285		100

The total sums assured, including bonus additions under ordinary life assurance policies issued by Indian companies, have increased by over one crore during the year and amount to over 25 crores of rupees, or over 27 million pounds sterling at the present rate of exchange.

Neither the total sums assured remaining in force nor the total amount for which policies are issued each year in India by all companies can be stated, as, unfortunately, particulars of this nature are not required to be submitted by the British companies and by some of the other companies which transact business both in the United Kingdom and in India.

The average rate of annual premium payable under the policies issued by Indian companies is nearly 5½ per cent. of the sum assured. The corresponding rate deduced from the returns to the British Board of Trade is about 1 per cent. lower. This difference between these two rates is largely due to the fact that endowment assurances constitute nearly twice as large a proportion of the policies issued by Indian as by British companies.

The average amount of sum assured under the policies issued by the more soundly established Indian Companies is only about Rs. 1,800. The average sum assured by the Non-Indian Companies doing business in this country is nearly twice as large. Under most of the Indian companies' policies, the premiums are payable by monthly instalments, while in the other companies a much larger proportion of the premiums are renewable yearly and half-yearly than monthly.

British Colonial and Foreign Companies.—There are at present 24 British Colonial and Foreign Life Offices which have a place of business in India. Of these, 17 are constituted in Britain, 2 in Canada, 1 in Australia, 1 in the Straits Settlements, 2 in Shanghai, 1 in the United States of America. Nearly all are partially exempt from the operation of the Indian Life Assurance Companies' Act of 1912, on the ground that, when it came into force, they were carrying on business in the United Kingdom in conformity with the provisions of the British Assurance Companies Act of 1909.

All of these 24 companies grant annuities and in addition carry on the other classes of business shown in the following statement. This statement also indicates the proportion of each company's business which is transacted in the United Kingdom. Unfortunately no similar information can be given regarding their Indian business as none of the companies except the Great Eastern, the China and the Shanghai are required to give any particulars of this nature. These three companies transact about ten per cent. of their business in India.

Name of Company.	Year when established.	Place of Head Office.	Business done.								Percentage of life as- surance premium income in the United Kingdom to total life Assurance premium income.
			F=Fire insurance. M=Marine Insurance. C=Annuities certain, Capital redemption, etc. S=Sickness and accident. E=Employers' liability. G=Fidelity Guarantee and Burglary, etc.								
Constituted in the United Kingdom.	1. Alliance ..	1824	London ..	..	F	M	C		E	G	96.8
	2. Atlas ..	1808	Do. ..	..	F	..	C	S	E	G	99.2
	3. Commercial Union	1861	Do. ..	..	F	M	C		E	G	94.2
	4. Gresham ..	1848	Do. ..	..	..	..	C		..	..	15.9
	5. Law Union and Rock.	1806	Do. ..	..	F	..	C	S	E	G	100
	6. Liverpool, London and Globe.	1836	Liverpool	..	F	M	C	S	E	G	98.1

Constituted in the
United Kingdom.

List of British, Colonial and Foreign Companies—*contd.*

	Name of Company.	Year when established.	Place of Head Office.	Business done. F=Fire insurance. M=Marine Insurance. C=Annuities certain, Capital redemption, etc. S=Sickness and accident. E=Employers' liability. G=Fidelity Guarantee and Burglary, etc.							Percentage of life assurance premium income in the United Kingdom to total life Assurance premium income.
Constituted in the United Kingdom	7. London Assurance Corporation.	1720	London ..	..	F	M	C	S	E	G	92·6
	8. North British and Mercantile.	1823	Edinburgh ..	..	F	..	C	..	..	..	89·0
	9. Northern ..	1836	Aberdeen ..	..	F	..	C	S	E	G	93·0
	10. Norwich Union ..	1797	Norwich ..	..	..	..	C	..	..	..	68·8
	11. Phoenix ..	1782	London ..	..	F	M	C	S	E	G	88·0
	12. Royal ..	1845	Liverpool ..	..	F	M	C	S	E	G	85·2
	13. Royal Exchange..	1720	London ..	..	F	M	C	S	E	G	96·7
	14. Royal London Auxiliary.	1910	Do. ..	..	F	..	C	S	..	G	99·8
	15. Scottish Union and National.	1824	Edinburgh ..	..	F	M	C	S	E	G	85·5
	16. Standard ..	1825	Edinburgh ..	..	..	..	C	..	..	..	40·0
Not Constituted in the United Kingdom.	17. Yorkshire ..	1824	York ..	..	F	M	C	S	E	G	95·2
	18. Manufacturers ..	1887	Canada ..	..	..	..	..	..	..	..	·9
	19. Sun of Canada ..	1865	Canada ..	..	..	..	C	S	..	..	6·4
	20. National Mutual of Australasia.	1869	Australia ..	..	..	..	..	..	..	..	13·1
	21. Great Eastern ..	1909	Singapore ..	..	..	..	..	..	..	..	Nil.
	22. China ..	1898	Shanghai..	..	..	..	..	..	..	..	Nil.
	23. Shanghai ..	1905	Do. ..	..	..	..	..	..	..	..	Nil.
	24. New York ..	1845	United States of America.	..	..	..	..	..	..	..	1·1

The principal effects of the exemptions allowed to these British, Colonial and Foreign companies are that they are freed from the necessity either of making a deposit with the Controller of Currency or of stating the amount of business they do in India. Those granted exemptions are allowed to submit their accounts in the form required by the British Assurance Companies' Act of 1909. That Act is very similar to the Indian one.

Chambers of Commerce.

Modern commerce in India was built up by merchants from the west and was for a long time entirely in their hands. Chambers of Commerce and numerous kindred Associations were formed by them for its protection and assistance. But Indians have in recent years, taken a large and growing part in this commercial life. The extent of their participation varies greatly in different parts of India, according to the natural proclivities and genius of different races. Bombay, for instance, has led the way in the industrial and commercial regeneration of the new India, while Bengal, very active in other fields of activity, lags behind in this one. Arising from these circumstances we find Chambers of Commerce in Bombay, Karachi, Calcutta, Madras and other important centres, with a membership both European and Indian; but alongside these have sprung up in recent years certain Associations, such as the Bombay Indian Merchants' Chamber and Bureau, of which the membership is exclusively Indian. These different classes of bodies are in no sense hostile to one another and constantly work in association.

The London Chamber of Commerce in 1912, realising the increasing attention demanded by the economic development of India, took steps to form an "East India Section" of their organization. The Indian Chambers work harmoniously with this body, but are in no sense affiliated to it, nor is there at present any inclination on their part to enter into such close relationship, because it is generally felt that the Indian Chambers can themselves achieve their objects better and more effectively than a London body could do for them, and on various occasions the London Chamber, or the East India Section of it have shown themselves out of touch with what seemed locally to be immediate requirements in particular matters.

A new movement was started in 1913 by the Hon. Sir Fazulbhoy Currimbhoy Ibrahim, a leading millowner and public citizen of Bombay, which promises to lead to great improvement in strengthening Indian commercial organization. Sir Fazulbhoy's original plan was for the formation of an Indian Commercial Congress. The proposal met with approval in all parts of India. The scheme was delayed by the outbreak of war but afterwards received an impetus from the same cause and the first Congress was held in the 1915 Christmas holiday season in the Town Hall, Bombay. The list of members of the Reception Committee showed that all the important commercial associations of Bombay were prepared to co-operate actively.

The Congress was attended by several hundred delegates from all parts of India. Mr. (now the Hon. Sir) D. E. Wacha, President of the Bombay Indian Merchants' Chamber, presided, as Chairman of the Reception Committee, at the opening of the proceedings and the first business was the election of Sir Fazulbhoy Currimbhoy as the first President. The Congress resolved upon the establishment of an Associated Indian Chamber of Commerce, and elected a Provincial Committee empowered to

take the necessary steps to get the Association registered and to enrol members and carry on work as Committee of the Chamber until a new Committee should be appointed a year later. The Congress also approved of the draft constitution.

The following are the principal paragraphs of a Memorandum of Association of the new Associated Chamber as approved by the Congress:—

I. The name of the Chamber will be "THE ASSOCIATED INDIAN CHAMBER OF COMMERCE."

II. The Registered Office of the Chamber will be in Bombay.

III. The objects for which the Chamber is established are:—

- (a) To discuss and consider questions concerning and affecting trade, commerce, manufactures, and the shipping interests, at meeting of delegates from Indian Chambers of Commerce and Commercial Associations or Bodies and to collect and disseminate information from time to time on matters affecting the common interests of such Chambers or Associations or Bodies and the commercial, manufacturing and shipping interests of the country.
- (b) To communicate the opinions of the Chambers of Commerce and other Commercial Associations or Bodies separately or unitedly, to the Government or to the various departments thereof, by letter, memorial, deputation or otherwise.
- (c) To petition Parliament or the Government of India or any Local Government or authority on any matter affecting trade, commerce, manufacture or shipping.
- (d) To prepare and promote in Parliament or in the Legislative Councils of India, both Imperial and Provincial, Bills in the interest of trade, commerce, manufactures, and shipping of the country and to oppose measures which, in the opinion of the Chamber, are likely to be injurious to those interests.
- (e) To attain those advantages by united action which each Chamber or Association or body may not be able to accomplish in its separate capacity.
- (f) To have power to establish an office either in England or in any part of British India with an Agent there, in order to ensure to the various Chambers early and reliable information on matters affecting their interests and to facilitate communication between the Chamber or individual chambers and the Government or other public bodies, and generally to conduct and carry on the affairs of the Chamber.
- (g) To organise Chambers of Commerce, Commercial Associations or Bodies in different trade centres of the Country,

- (h) To convene when necessary the Indian Commercial Congress at such places and at such times as may be determined by a Resolution of the Chamber.
- (i) To do all such other things as may be incidental or conducive to the above objects.

The Articles of Association provide for the management of the Chamber by an Executive Council composed of a President, Vice-President, and ten other members elected at the annual meeting of the Associated Chamber, the Executive Council to present a report and statement of accounts at each annual meeting.

The Articles declare the number of members of the Associated Chamber not to exceed one hundred, and the Executive Council are given power to elect honorary members. "There shall be an annual meeting of the Associated Indian Chamber held at Bombay on a date to be fixed by the Executive Council in the month of February," or at some other time, and "semi-annual or special meetings . . . may be convened by the Executive Council or on the requisition of one-third of the total number of members addressed to the Secretary . . ."

The following are details of the principal Chambers of Commerce and kindred bodies in India at the present time :—

BENGAL.

The Bengal Chamber of Commerce was founded in 1834. Its head-quarters are in Calcutta. Other societies connected with the trade and commerce of the city are the Royal Exchange, the Bengal Bonded Warehouse Association, the Calcutta Trades Association, the Bengal National Chamber of Commerce and the Marwari Chamber of Commerce. The Bengal Chamber is registered with a declaration of membership of 300. Its objects are the usual purposes connected with the protection of trade "in particular in Calcutta." There are two classes of members, Permanent and Honorary.

Merchants, bankers, shipowners, representatives of commercial, railway and insurance companies, brokers, persons and firms engaged in commerce, agriculture, mining or manufacture, and joint stock companies or other corporations, formed for any purpose or object connected with commerce, agriculture, mining or manufacture, and persons engaged in or connected with art, science or literature, may be elected as permanent members of the Chamber.

The following are the office bearers of the Chamber for the year 1919-20 :—

President.—Hon. Mr. W. E. Crum, O.B.E. (Graham & Co.).

Vice-President.—Hon. Mr. A. R. Murray, C.B.E. (Thos. Duff & Co., Ltd.).

Committee.—Messrs. J. A. Marshall (East Indian Railway), W. Mc A. Houstoun (Mackinnon, Mackenzie & Co.), W. O. Grazebrook (Gillanders Arbuthnot & Co.), C. Kennedy (National Bank of India, Ltd.), Hon. Mr. R. V. Mansell, O.B.E., (James Finlay & Co.), B. A. White (Bird & Co.) and Hon. Sir Frank Carter, C.I.E., C.B.E. (Turner, Morrison & Co.).

The Secretary of the Chamber is Mr. H. M. Haywood. Asst. Secys.—Mr. D. K. Cunison and Mr. A. C. Daniel.

The following are the public bodies (among others) to which the Chamber has the right of returning representatives, and the representatives returned for the current year :—

Viceroy's Legislative Council.—The Hon'ble Mr. W. E. Crum, O.B.E.

Bengal Legislative Council.—The Vice-President of the Chamber and the Hon. Sir Frank Carter, C.I.E., C.B.E.

Calcutta Port Commission.—Mr. S. G. L. Eustace (Kilburn & Co.), the Hon. Mr. W. E. Crum, O.B.E. (Graham & Co.), Mr. W. Mc A. Houstoun (Mackinnon, Mackenzie & Co.), Mr. C. F. Beadel (Becker, Gray & Co.), the Hon. Sir Frank Carter, C.I.E., C.B.E. (Turner Morrison & Co., Ltd.), and Mr. L. Edwards (Andrew Yule & Co.).

Calcutta Municipal Corporation.—Messrs. Norman R. Luke (Jas. Luke & Sons), Geo. Morgan (H. D. Cartwright & Co.), T. R. Pratt and W. R. Rae (Sun Insurance Office).

Bengal Boiler Commission.—Messrs. C. L. Thomson (Standard Jute Mills Co., Ltd.), Gen. George (Andrew Yule & Co.) and H. E. Skinner (Jessop & Co., Ltd.).

Board of Trustees of the Indian Museum.—Hon. Mr. R. M. Watson Smyth (Turner Morrison & Co., Ltd.).

Bengal Smoke Nuisances Commission.—Messrs. A. W. Dods (Burn & Co., Ltd.) and J. R. Murray (Clive Jute Mills).

Calcutta Improvement Trust.—Hon. Sir Frank Carter, C.I.E., C.B.E. (Turner Morrison & Co., Ltd.).

The Chamber elects representatives to various other bodies of less importance, such as the committee of the Calcutta Sailors' Home, and to numerous subsidiary associations. The following are the recognised associations of the Bengal Chamber of Commerce :—

Calcutta Wheat and Seed Trade Association, Indian Jute Mills Association, Indian Tea Association, Calcutta Tea Traders Association, Calcutta Fire Insurance Agents Association, Calcutta Import Trade Association, Calcutta Marine Insurance Agents Association, The Wine, Spirit and Beer Association of India, Indian Mining Association, Calcutta Baled Jute Association, Indian Paper Makers Association, Indian Engineering Association, Jute Fabric Shippers Association, Calcutta Hydraulic Press Association, Jute Fabric Brokers Association, Baled Jute Shippers Association, Calcutta Jute Dealers Association, Calcutta Liners Conference, Calcutta Hides and Skins Shippers Association and Northern India Tanners' Federation.

The Chamber maintains a Tribunal of Arbitration for the determination, settlement and adjustment of disputes and differences relating to trade, business, manufactures, and to customs of trade, between parties, all or any of whom reside or carry on business personally or by agent or otherwise in Calcutta, or elsewhere in India or Burmah, by whomsoever of such parties the said disputes and differences be submitted. The Secretary of the Chamber acts as the Registrar of the Tribunal, which consists of such members or assistants to members as may, from time to time, annually or otherwise be selected by the Registrar and willing to serve on the Tribunal. The Registrar from time to time makes a list of such members and assistants.

The Chamber also maintains a Licensed Measurers Department controlled by a special committee. It includes a Superintendent (Mr. R. Ellis), Deputy Superintendent (Mr. A. H. Lugg) and six Assistant Superintendents and the staff at the time of the last official returns consisted of 167 officers. The usual system of work for the benefit of the trade of the port is followed. The Department has its own provident fund and compassionate funds and Measurers' Club. The Chamber does not assist in the preparation of official statistical returns. It publishes weekly the *Calcutta Prices Current* and its Monthly Supplement and also publishes a large number of statistical circulars of various descriptions in addition to a monthly abstract of proceedings and many other circulars on matters under discussion.

BOMBAY.

The object and duties of the Bombay Chamber, as set forth in their rules and regulations, are to encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; to promote and protect the general mercantile interests of this Presidency; to collect and classify information on all matters of general commercial interest; to obtain the removal, as far as such a Society can, of all acknowledged grievances affecting merchants as a body, or mercantile interests in general; to receive and decide references on matters of usage and custom in dispute, recording such decisions for future guidance, and by this and such other means, as the Committee for the time being may think fit, assisting to form a code of practice for simplifying and facilitating business; to communicate with the public authorities, with similar Associations in other places and with individuals, on all subjects of general mercantile interests; and to arbitrate between parties willing to refer to, and abide by, the judgment of the Chamber.

The Bombay Chamber was established in 1836, under the auspices of Sir Robert Grant, who was then Governor of the Presidency, and the programme described above was embodied in their first set of rules. There is affiliated with the Chamber the Bombay Mill-owners' Association, which exists to carry out the same general objects as the Chamber in the special interests of "millowners and users of steam and water power." According to the latest returns, the number of members of the Chamber is 136. Of these 17 represent banking institutions, 5 shipping agencies and companies, 3 firms of solicitors, 3 railway companies, 4 insurance companies, 8 engineers and contractors, 96 firms engaged in general mercantile business.

All persons engaged or interested in mercantile pursuits desirous of joining the Chamber and disposed to aid in carrying its objects into effect are eligible to election to membership by ballot. The Chamber member's subscription is Rs. 20, and the Associate member's subscription is Rs. 15 per month and an additional charge of Rs. 240 per annum is made to firms as subscription to the trade returns published by the

Chamber. Gentlemen distinguished for public services, or "eminent in commerce and manufactures," may be elected honorary members and as such are exempt from paying subscriptions. Any stranger engaged or interested in mercantile pursuits and visiting the Presidency may be introduced as a visitor by any Member of the Chamber inserting his name in a book to be kept for the purpose, but a residence of two months shall subject him to the rule for the admission of members.

Officers of the Year.

The affairs and funds of the Chamber are managed by a committee of nine ordinary members, consisting of the chairman and deputy-chairman and seven members. The committee must, as a rule, meet at least once a week and the minutes of its proceedings are open to inspection by all members of the Chamber, subject to such regulations as the committee may make in regard to the matter. A general meeting of the Chamber must be held once a year and ten or more members may requisition, through the officers of the Chamber, a special meeting at any time, for a specific purpose.

The Chamber elects representatives as follows to various public bodies:—

Legislative Council of the Governor-General, one representative. The Chamber may elect anyone, but in practice they have hitherto returned their chairman.

Legislative Council of the Governor of Bombay, one representative, who may also be anyone, but is, in practice, always the deputy chairman.

Bombay Municipal Corporation, two members, elected for three years.

Board of Trustees for the Improvement of the City of Bombay, one member, elected for two years.

Board of Trustees of the Port of Bombay, five members, two and three being elected in alternate years.

Representatives on the Legislative Councils become ex-officio members of the committee of the Chamber, during their terms of office, if they are not already members.

The following are the officers of the Chamber for the year 1918-19 and their representatives on the various public bodies:—

Chairman.—The Hon'ble Mr. Nigel F. Paton (W. & A. Graham & Co.)

Deputy Chairman.—The Hon'ble Mr. R. H. Brooke (Bombay Coy., Ltd.)

Committee.—Sir Thomas Birkett, Kt. (Killick Nixon & Co.), Sir Lawless Hepper, Kt. (G. I. P. Railway), Messrs. T. W. Dowding, (Turner Morrison & Co., Ltd.), J. H. Fyfe (Mackinnon Mackenzie & Co.), Malcolm N. Hogg (Forbes, Forbes, Campbell & Co., Ltd.), D. M. Inglis (James Finlay & Co., Ltd.), Ralph Kidd (National Bank of India, Ltd.).

Secretary : Mr. R. E. Gregor-Pearse.

Representatives on—

Viceregal Legislative Council : The Chairman.

Bombay Legislative Council : The Deputy Chairman.

Bombay Improvement Trust : Mr. A. M. Tod.

Bombay Port Trust : The Hon'ble Mr. Nigel F. Paton, Mr. Malcolm N. Hogg, Mr. Meyer Nissim, Mr. A. H. Froom and Sir Thomas Birkett, Kt.

Bombay Municipality : Messrs. H. G. Cocke (A. F. Ferguson & Co.) and A. M. Tod (Eagle, Star and British Dominions Insurance Co., Ltd.).

Advisory Board of Sydnham College of Commerce and Economics : Messrs. W. A. Haig Brown and C. H. Wilson, J.L.E.)

Bombay Smoke Nuisances Commission : Mr. F. C. Annesley.

St. George's Hospital Advisory Committee : Sir Stanley Reed, Kt., LL.D.

Special Work.

One of the most important functions performed by the Chamber is that of arbitration in commercial disputes. Rules for this have been in existence for many years and have worked most satisfactorily. The decisions are in all cases given by competent arbitrators appointed by the General Committee of the Chamber and the system avoids the great expense of resort to the Law Courts.

A special department of the Bombay Chamber is its Statistical Department, which prepares a large amount of statistical returns connected with the trade of the port and of great importance to the conduct of commerce. The department consists of eleven Indian clerks who, by the authority of Government, work in the Customs House and have every facility placed at their disposal by the Customs authorities. They compile all the statistical information in connection with the trade of the port, in both export and import divisions, which it is desirable to record. No other Chamber in India does similar work.

The Bombay Chamber publish a Daily Arrival Return which shows the receipts into Bombay of cotton, wheat and seeds, and a Daily Trade Return, which deals with trade by sea and shows in great detail imports of various kinds of merchandise and of treasure, while the same return contains particulars of the movements of merchant vessels.

The Chamber publishes twice a week detailed reports known as Import and Export manifests, which give particulars of the cargo carried by each steamer to and from Bombay.

Three statements are issued once a month. One shows the quantity of exports of cotton seeds and wheat from the principal ports of the whole of India. The second gives in detail imports from Europe, more particularly in regard to grey cloths, bleached cloths, Turkey red and scarlet cloths, printed and dyed goods, fancy cloth of various descriptions, woollens, yarns, metals, kerosine oil, coal, aniline dyes, sugar, matches, wines and other sundry goods. The third statement is headed, "Movements of Piece Goods and Yarn by Rail," and show the despatches of imported and local manufactured piece-goods and yarn from Bombay to other centres of trade served by the railways.

The "Weekly Return" issued by the Chamber shows clearances of a large number of important descriptions of merchandise. A return of "Current Quotations" is issued once a week, on the day of the departure of the English mail, and shows the rates of exchange for Bank and Mercantile Bills on England and Paris, and a large quantity of general banking and trade information.

The annual reports of the Chamber are substantial tomes in which the whole of the affairs of the Chamber and the trade of the port during the past year are reviewed.

The Chamber has also a Measurement Department with a staff of 17, whose business is that of actual measurement of exports in the docks before loading in steamers. Certificates are issued by these officers with the authority of the Chamber to shippers and ship agents as to the measurement of cotton and other goods in bales or packages. The measurers are in attendance on the quays whenever there are goods to be measured and during the busy season are on duty early and late. The certificates granted show the following details:—

- (a) the date, hour and place of measurement ;
- (b) the name of the shipper ;
- (c) the name of the vessel ;
- (d) the port of destination ;
- (e) the number and description of packages ;
- (f) the marks ;
- (g) the measurement ; and, in the case of goods shipped by boats,
- (h) the registered number of the boat ;
- (i) the name of the tindal.

Bombay Millowners' Association.

The Bombay Millowners' Association was established in 1875 and its objects are as follows:—

- (a) The protection of the interests of millowners and users of steam, water and/or electric power in India ;

- (b) The promotion of good relations between the persons and bodies using such power;
- (c) The doing of all those acts and things by which these objects may be furthered.

Any individual partnership or company, owning one or more mill or mills or one or more press or presses or one or more ginning or other factory or factories actuated by steam, water, electric and/or other power is eligible for membership, members being elected by ballot. Every member is entitled to one vote for every complete sum of Rs. 50 paid by him as annual subscription.

The membership of the Association in 1919 numbered 102.

The following is the Committee for 1919:—

Mr. N. G. Hunt (*Chairman*), Mr. Rahimtoola Currimbhoy Ebrahim (*Deputy Chairman*), The Hon. Sir Dinshaw M. Petit, Bart., Sir Sassoon David, Bart., The Hon. Sir Fazulbhoy Currimbhoy, Kt., C.B.E., The Hon. Sir Dinshaw E. Wacha, Kt., The Hon. Mr. C. V. Mehta, The Hon. Mr. Munmohandass Ramji, Messrs. A. Geddis, Mathradas Goculdas, Narottam M. Goculdas, Cowasjee Jehangir (*Jun.*), O.B.E., J. A. Kay, Meyer Nissim, Jehangir B. Petit, A. J. Raymond, N. B. Saklatwalla, Madhowjee D. Thackersey and C. N. Wadia, C.I.E.

Mr. R. E. Gregor-Pearse, *Secretary*.

The following are the Association's Representatives on public bodies:—

Legislative Council of H. E. the Governor of Bombay: The Hon'ble Sir Dinshaw M. Petit, Bart.

Bombay Port Trust: Sir Vithaldas D. Thackersey, Kt.

City of Bombay Improvement Trust: Sir Sassoon David, Bart.

Victoria Jubilee Technical Institute: Mr. Jehangir Bomanjee Petit.

Bombay Smoke Nuisances Commission: Messrs. C. N. Wadia, C.I.E., and W. A. Sutherland.

Advisory Board of Sydenham College of Commerce and Economics: Mr. N. G. Hunt.

Indian Merchants' Chamber.

The Bombay Indian Merchants' Chamber and Bureau was established in 1907 with the following objects:—"To encourage a friendly feeling and unanimity among the commercial men on all subjects involving their common good; to promote and protect the trade, commerce and manufactures of India and in particular to promote the general commercial interests of the Presidency of Bombay; to consider and deliberate on all questions affecting the rights of Indian Merchants, to represent to the Government their grievances, if any, and to obtain by constitutional methods the removal of such grievances; to collect and compile and distribute in such manner as may be the most expedient for purposes of disseminating commercial and

economic knowledge, all statistics and other information relating to trade, commerce and finance, specially India: as well as to form and maintain library, and generally to do all such matters as may promote the above objects in view; to arbitrate between parties willing to refer and abide by the judgment of the Chamber; to receive and decide references of matters of usage and custom in dispute, recording such decisions of future guidance and assisting by this and such other means, as the committee for the time being may think fit; to form a code of practice so as to simplify and facilitate the transaction of business."

The Chamber has not yet taken up the work of arbitration, measurements, etc.

The following bodies are connected directly and indirectly with the Chamber, though no public body is directly affiliated to it:—

The Bombay Native Piece-goods Association (which sends a large number of representatives);

The Grain Merchants' Association (which is a member);

The Hindustani Native Merchants' Association (which is a member);

The Bombay Rice Merchants' Association;

The Bombay Fancy Piece-goods Association;

The Bombay Yarn, Copper and Brass Native Merchants' Association.

The Chamber elects a representative jointly with the Bombay Native Piece-goods Merchants' Association to the Bombay Legislative Council and a representative to the Board of Trustees for the Port of Bombay, whenever it is notified by the Government (*vide* Act No. 1 of 1909). The Chamber also has the right to elect a representative on the Board of the Sydenham College of Commerce and Economics, Bombay.

Any person engaged in mercantile pursuits or interested in trade and commerce desirous of joining the Chamber is eligible for membership, there being two classes of members, *viz.*, Ordinary and Honorary. Ordinary members shall be (1) Resident members who pay Rs. 30 annual fee, except that if an Association joins as a member it shall have to pay an annual fee of Rs. 100, and (2) Mofussil members who pay Rs. 5 as annual fee. An ordinary member also pays an entrance fee of Rs. 50 on being elected.

Gentlemen distinguished for public services or eminent in commerce and manufactures or otherwise interested in the aims and objects of the Chamber may be elected as Honorary members by a General Meeting of the Chamber on the recommendation of the Committee and as such are exempted from paying subscriptions. They are not entitled to vote at any meeting of the Chamber nor they are eligible to serve on the Committee. They are, however, supplied all the publications of the Chamber free of charge.

The following are the office-bearers of the Chamber for the year 1919-20:—

Chairman.—Mr. Jehangir Bamonji Petit.

Vice-Chairman.—Mr. Sorabji Edulji Warden.

Committee.—Hon'ble Mr. Purshottamdas Thakoredas, C.I.E., Hon'ble Sir Fazalbhoy Currimbhoy Ibrahim, Hon. Mr. Chunilal V. Mehta, Hon. Mr. Lallubhai Samaldas, C.I.E., Hon. Mr. Mamohandas Ramji, Mr. Hansraj Pragji Thackersey, Mr. Surajmal Lallubhai, Mr. Lakhmidas Ravji Tersey, Mr. Vallabdas Chaturbhuj Shivji, Mr. Motilal Vallabhji, Mr. Vithaldas Damodar Govindji, Sir Vithaldas Damodar Thackersey, Mr. Motilal Kanji, Mr. Gulabchand Devchand, Mr. Manu Subedar, Mr. Devidas Madhavji Thackersey, Mr. Phiroz J. Billimoria, Mr. Jethamal Narandas, Mr. Fazal Ibrahim Rahimtulla, Mr. Girjashankar B. Trivedi, Mr. Mansukhlal Atmaram Master, Mr. Mavji Govindji, Mr. Lalji Govindji, Mr. Naranji Haribhai, Mr. Lakhmichand Manekechand Khokhani, Mr. Mathuradas Kanji Matani, Mr. D. F. Madon, and Mr. N. M. Mazumdar.

Secretary.—Mr. J. K. Mehta, M. A.

The following are the Chambers' representatives on various public bodies:—

Bombay Legislative Council.—The Hon. Mr. Munmohandass Ramji.

Bombay Port Trust.—Mr. Manu Subedar, B.A., B. SC., (Econ.) F.S.S., Barrister-at-Law.

Advisory Board of the Sydenham College of Commerce.—The Hon. Sir D. E. Wacha.

The staff of the Chamber include:—

Secretary.—Mr. J. K. Mehta, M. A.

Assistant Secretary.—Mr. S. M. Muzumdar, M.A., LL.B.

Honorary Auditor.—Mr. Devidas Vithaldas.

Chamber's Solicitors.—Messrs. Edgelow, Gulabchand, Wadia & Co.

The Chamber publishes every month a journal in Gujarati giving information on commercial and industrial subjects and publishing all statistics considered important relating to trade and commerce of India.

Cotton Trade Association.

The Bombay Cotton Trade Association, Limited, was founded in 1876. The objects for which it was established were, *inter alia*, "to adjust disputes between persons engaged in the cotton trade, to establish just and equitable principles in the trade, to maintain uniformity to rules, regulations and usages in the trade, to adopt standards of classification in the trade, to acquire, preserve and disseminate useful information connected with the cotton interests throughout all markets and generally to promote the cotton trade of the City of Bombay and India and augment the facilities with which it may be conducted." In 1892 the Association was incorporated under the Indian Companies Act, 1882, with a Capital of Rs. 50,000, in 50 shares of Rs. 1,000 each. In 1917 the share capital was increased to Rs. 60,000. In addition to the shareholders (Members), the Association had in 1918 126 Associate Members. The affairs of the Company are managed by a Board of Directors not less than nine or more

than twenty in number. The present Directorate is constituted as follows:—

Chairman.—Mr. T. D. Moore (New Mofussil Co., Ltd.).

Deputy Chairman.—James P. Chrystal (P. Chrystal & Co.)

Messrs. J. L. Ainsworth (Gill & Co.), Anandilal Ishwardas (Anandilal Ishwardas & Co.), G. Boyagis (Ralli Brothers), C. W. de Breul (Breul & Co.), K. Futamura (Gosho Kabushike Kaisha), The Hon'ble Mr. Purshottamdas Thakoredas (Narandas Rajaram & Co.), C. H. Roberts (Prier de Saone & Co.), Ramnarain Harnandrai (Harnandrai Ramnarain), N. B. Saklatwala (Tata Sons & Co.), Vassonjee Jeewandas (Khimjee Visram), C. N. Wadia (The Century Spinning and Weaving Co., Ltd.), C. H. Goodal (The Bombay Co., Ltd.), R. Cedraschi (Volkart Brothers), K. Tankada (Mitsui Bussan Kaisha, Ltd.), T. Ohta (Japan Cotton Trading Co., Ltd.).

Secretary.—Mr. E. S. W. Miles.

Bombay Native Piece-Goods Merchants' Association.

The objects of the Association are as follow:—

(a) To promote by creating friendly feelings and unity amongst the Merchants, the business of the piece-goods trade in general at Bombay, and to protect the interest thereof; (b) to remove, as far as it will be within the powers of the Association to do so, all the trade difficulties of the piece-goods business and to frame such line of conduct as will facilitate the trade; (c) to collect and assort statistics relating to piece-goods and to correspond with public bodies on matters affecting trade, and which may be deemed advisable for the protection and advancement of objects of the Association or any of them; and (d) to hear and decide disputes that may be referred to for arbitration.

The following are the office-bearers for the current year:—

Chairman.—The Hon. Mr. Manmohandas Ramji.

Deputy Chairman.—Mr. Devidas Madhavji Thackersey, J.P.

Hon. Joint Secretaries.—Messrs. Lalji Govindji and Goculdas Jivraj Dayal.

Hony. Treasurer.—Mr. Mathuradas Haridas.

Grain Merchants' Association.

The object of this body is "to promote the interests of the merchants and to put the grain and seeds trade on a sound footing." It is an influential body of large membership. The office holders for the current year are as follow:—

Chairman.—Mr. Velji Lakhamsi, B.A., LL.B.

Vice-Chairman.—Mr. Dharsi Khetsi (Messrs. Talockchand Mauraj).

Hony. Secretary.—Mr. Pragji Mohonji Kothari.
Secretary.—Mr. Lalshanker Harprasad.

KARACHI.

The objects and duties of the Karachi Chamber are set forth in terms similar to those of Bombay. Qualifications for membership are also similar. Honorary membership is conferred upon "any gentlemen interested in the affairs and objects of the Chamber", subject to election by the majority of the votes of members. All new members joining the Chamber pay Rs. 100 entrance fee and the monthly subscriptions is Rs. 6 for any member contributing Rs. 600 to the Chamber Fund, in addition to entrance fee, and Rs. 12 without such contribution. The subscription for the Chamber's periodical returns is Rs. 5 per month. The affairs of the Chamber are managed by a committee of ten members, consisting of a Chairman, Vice-Chairman and eight members, elected at the annual meeting of the Chamber in January or immediately after. The Chamber elects a representative on the Bombay Legislative Council and three representatives on the Karachi Port Trust. There were last year 56 members of the Chamber, and 7 Honorary Members.

The following are the officers of the Chamber for the current year:—

Chairman.—Mr. H. G. Houghton (Messrs. Donald Graham & Co.).

Vice-Chairman.—The Hon'ble Mr. F. Clayton (Messrs. Fleming, Shaw & Co.).

Managing Committee.—Messrs. N. D. Calder (North Western Railway), C. C. Demetriadi (Messrs. Ralli Brothers), Geo. Gordon (Chartered Bank of India, Australia and China), E. Miller (Ewart Ryrie & Co.), A.

W. Oliver (Bombay Company Ltd.), E. A. Pearson (Forbes, Forbes, Campbell & Co., Ltd.), H. C. Whitehouse (Sanday, Patrick & Co.), and W. D. Young (Couper and Young).

Representative on the Bombay Legislative Council.—The Hon'ble Mr. F. Clayton.

Representatives on the Karachi Port Trust.—Mr. A. O. Brown, Mr. E. A. Pearson and Mr. H. G. Houghton.

Secretary.—Mr. E. L. Rogers.

Public Measurer.—Captain S. Mylcrist.

The following are the principal ways in which the Chamber gives a special assistance to members. The Committee take into consideration and give an opinion upon questions submitted by members regarding the custom of the trade or of the Port of Karachi. The Committee undertake to nominate European surveyors for the settlements of disputes "as to the quality or condition of merchandise as to the quality in which both parties desire the Chamber to do so." When two members of the Chamber or when one member and a party who is not a member have agreed to refer disputes to the arbitration of the Chamber or of an arbitrator or arbitrators nominated by the Chamber, the Committee will undertake to nominate an arbitrator or arbitrators, under certain regulations. A public measurer is appointed under the authority of the Chamber to measure pressed bales of cotton, wool, hemp, hides and other merchandise in Karachi.

MADRAS.

The Madras Chamber of Commerce was founded in 1886. All merchants and other persons engaged or interested in the general trade, commerce and manufactures of Madras are eligible for membership. Any assistant signing a firm or signing *per pro* for a firm is eligible. Members who are absent from Madras but pay their subscriptions may be represented in the Chamber by their powers-of-attorney, as honorary members, subject to ballot. Honorary members thus elected are entitled to the full privilege of ordinary members. Election for membership as by ballot at a general meeting, a majority of two-thirds of the recorded votes being necessary to secure election. Every member pays an entrance fee of Rs. 100, provided that banks, corporate bodies and mercantile firms may be represented on the Chamber by one or more members and are liable for an entrance fee of Rs. 100 once in ten years each. The subscription shall not exceed Rs. 160 per annum, payable quarterly in advance, subject to reduction from time to time in accordance with the state of the Chamber's finances. Absentees in Europe pay no subscription and members temporarily absent from Madras pay one rupee per month. Honorary members are admissible to the Chamber on the usual conditions. Members becoming insolvent cease to be members but are eligible for re-election without repayment of the entrance donation.

The Chamber undertakes arbitrations and surveys, the granting of certificates of origin and the registration of trade marks. One of the rules for the last named is "that no trade mark on ticket shall be registered on behalf of an Indian firm trading under a European name."

The following publications are issued by the Chamber:—Madras Price Current and Market Report, Tonnage Schedule and Madras Landing Charges and Harbour Dues Schedule.

There are 40 members and five honorary members of the Chamber in the current year and the officers and committee for the year are as follows:—

Chairman.—The Hon'ble Sir Gordon Fraser.

Vice-Chairman.—Mr. J. F. Simpson.

Committee.—Messrs. A. A. Biggs, A. J. Leech, N. M. Murray, H. P. M. Rae and F. E. L. Worke.

The following are bodies to which the Chamber are entitled to elect representatives, and the representatives elected for the year:—

Madras Legislative Council.—The Hon'ble Sir Gordon Fraser.

Madras Port Trust.—The Hon'ble Sir Gordon Fraser (Best & Co., Ltd.), Mr. H. P. M. Rae (The Bombay Co., Ltd.), Mr. J. F. Simpson (Gordon Woodroffe & Co.), Mr. W. A. Turner (Binny & Co., Ltd.).

Madras Municipal Corporation.—Mr. A. J. Leech (T. A. Taylor & Co.)

British Imperial Council of Commerce, London.—Mr. A. D. Jackson (Europe).

Indian Tea Cess Committee.—Mr. C. E. Wood (Parry & Co.).

Southern India Chamber.

The Southern India Chamber of Commerce has its Registered Office in Madras. The objects of the Chamber are those usual for such bodies, concerning the promotion of trade, especially in the Madras Presidency, and the interests of members. Special objects are stated to be:—

“To maintain a Library of books and publications of commercial interest, so as to diffuse commercial information and knowledge amongst its members.

“To establish Museums of commercial products or organise exhibitions, either on behalf of the Chamber or in co-operation with others.”

UPPER INDIA CHAMBER.

The Upper India Chamber of Commerce is concerned with trade, commerce and manufactures in the United Provinces and has its registered office at Cawnpore. Members are elected by the Committee, subject to confirmation by the next general meeting of the Chamber. Gentlemen distinguished for public service, or eminent in commerce or manufactures, may be elected honorary members of the Chamber by the members in a General Meeting and such shall be exempted from paying any subscription to the Chamber. There is no entrance fee for membership, but subscriptions are payable as follows:—A firm company or association having its place of business in Cawnpore, Rs. 200 a year; an individual member, resident or carrying on business in Cawnpore, Rs. 100; firms or individuals having their places of business or residence outside Cawnpore pay half the above rates, but the maintenance of a branch office in Cawnpore necessitates payment of full rates.

The affairs and funds of the Chamber are managed by a Committee of ten members, which has power to constitute Local Committees, of from four to seven members each, at trade centres where membership is sufficiently numerous to justify the step. Such Local

There are two classes of members, permanent and honorary. The usual conditions as to eligibility for election prevail.

The right of electing two representatives to the Madras Port Trust was accorded to the Chamber by the Madras Port Trust Amendment Act, 1915. Members of the Chamber hold seats in the Madras Legislative Council but the Chamber does not enjoy the right of electing representatives to that body. Under the Madras City Municipal Act, 1919, the Chamber has the right of electing two Councillors to the Madras Corporation.

President—Rao Bahadur P. Theagaroya Chettiar, B.A.

Vice-Presidents—Khan Bahadur M. A. Kuddus Badsha Sahib and Dewan Bahadur Govindoss Chathurbhoojadosh.

Honorary Secretaries.—The Hon'ble Rao Sahib M. C. T. Mithia Chetty and Moulana Abdus Subban Sahib.

Asst. Secretary—C. Duraiswami Aiyangar, B.A.

Committees have power to communicate only with the Central Committee.

The Chamber appoints arbitration Tribunals for the settlement and adjustment of disputes when invited to do so, members of the Tribunals being selected from a regular printed list of arbitrators.

The Chamber has in the present year 69 members, three honorary members and seven affiliated members.

The following are the officers:—

President—The Hon. Mr. Thomas Smith (Muir Mills Co., Ltd.)

Vice-President—Mr. T. D. Eidelston (Begg Sutherland & Co.).

Members.—Mr. A. W. Lilley (Cawnpore Woollen Mills Co., Ltd.), Mr. S. H. Taylor (Elgin Mills Co., Ltd.), Mr. C. T. Allen (Cooper, Allen & Co., Ltd.), Mr. B. R. Briscoe (Cawnpore Cotton Mills Co., Ltd.), Mr. E. L. Watson (D. Waldie & Co., Ltd.), Mr. A. E. Tylden-Pattenson (G. I. P. Railway), Mr. K. M. Balfour (Allahabad Bank, Ltd.), Mr. E. M. Soutor (Ford and Macdonald, Ltd.).

Secretary.—Mr. J. G. Ryan.

Head Clerk.—Mr. B. N. Ghosal.

PUNJAB.

The Punjab Chamber of Commerce has its headquarters at Delhi and exists for the care of mercantile interests on the usual lines in the Punjab, the North-West Frontier Province and Kashmir. There are affiliated branches of the Chamber at Lahore and Amritsar. Members are elected by ballot, the only necessary qualification being interest in mercantile pursuits. There is no entrance fee. The rate of subscription is Rs. 10 per month. The

Chamber returns one member to a seat on the Punjab Legislative Council and one on the Municipal Corporation, Delhi and Amritsar.

The following are the Officers, Committee and Representatives on public bodies as at the end of November 1918:—

President.—Mr. R. E. Grant Govan (The Delhi Flour Mills Co., Ltd.).

Vice-President.—Lala Girdhari Lal (Amritsar Flour and General Mills Co., Ltd.)

Committee.—Mr. R. E. Grant Govan (The Delhi Flour Mills Co., Ltd.), Mr. P. Mukerjee (P. Mukerjee & Co.), Mr. D. N. Bhanja (Messrs. Kerr Tarruck & Co.), Mr. Abdul Satta (L. M. Fasal Ellahie), Sardar Jaideo Singh (K. B. Boota Singh & Sons), Sardar Sobha Singh (Khalsa Spinning and Weaving Mills), Mr. W. R. Macpherson (Spedding & Co.), Mr. P. B. Christo (Messrs. Christo & Co.), Lala Motiram Mehra (Messrs. Motiram Mehra & Co.), Lala L. D. Lachmi Narain.

Representative on Punjab Legislative Council.—The Hon'ble Mr. F. C. Walle.

Representative on the Delhi Municipal Committee.—Mr. R. E. Grant Govan (The Delhi Flour Mills Co., Ltd.)

Honorary Secretary.—Mr. P. Mukerjee.

The Chamber is affiliated with the British Imperial Council of Commerce, London, and is represented in England by Sir James Walker, C. I. E., Alliance Bank of Simla, and Mr. H. C. Chalmers, National Bank of India, Ltd., London.

UNITED PROVINCES.

The number of members on register is 113 (70 Local and 43 mofussil). All the important commercial and industrial interests of the provinces of Agra and Oudh are represented.

Committee.—

Presidents.—Rai Bahadur Lala Bishambhar Nath (Proprietor, Sri Krishna Ginning Factory, Director, Punjab National Bank, Ltd., and Ramchandra Gursahaimal Cotton Mills Co., Ltd.).

Vice-Presidents.—The Hon'ble Mr. C. Y. Chintamani, Allahabad, Raja Sambhu Dyal, Morawan; and Lala Hazari Mal (Hazari Mal Tulsi Ram, Cawnpore).

Secretary.—Babu Vikramajit Singh.

Joint Secretary.—Lala Jairam Das (Proprietor, Lylpur Sugar Co.).

Members.—Seth Ram Gopal (Kanehyalal Ram Gopal), Lala Ram Kumar (Ram Kumar Rameshwar Das), Lala Pancham Lal (Bhojraj Babulal), Lala Chunni Lal (Munlal & Co.), Lala Punna Lal (Gulabrai Mahadeo Pershad), Babu Gur Pershad (Bastiram Matadin), Mr. B. N. Sen (Sen & Co.), Lala Ghanshamdas (Hira Lal Ghanshamdas), Babu Dwarka Pershad Singh, The Hon'ble Raja Moti Chand, C.I.E., Benares, and the Hon'ble Pandit Gokaran Nath Misra, Lucknow.

BURMA.

The Burma Chamber of Commerce, with headquarters at Rangoon, exists to encourage friendly feeling and unanimity among commercial men on all subjects involving their common good, to promote and protect trade, commerce and manufactures and, in particular, the general mercantile interests of the province, to communicate with public authorities, associations and individuals on all matters, directly or indirectly affecting these interests, and to provide for arbitration between parties willing to refer to, and abide by, the judgment of arbitrators appointed by the Chamber. The following are affiliated bodies:—

Burma Fire Insurance Association.

Burma Marine Insurance Agents' Association.

Rangoon Import Association.

Tavoy Chamber of Mines.

The Chamber elects representatives to the following Public Bodies:—

Burma Legislative Council.

Rangoon Port Trust Board.

Rangoon Municipal Committee.

Victoria Memorial Park Trustees.

Pasteur Institute Committee.

Burma Boiler Commission.

All British corporations, companies, firms or persons engaged or interested in mercantile pursuits, such as merchants, bankers, ship-owners and brokers or who are connected with agriculture, mining, manufactures, insurance,

railways, commerce, art, science or literature shall be eligible to become Chamber Members. Every non-British concern or person, similarly engaged or interested as indicated above, other than a subject of a State with which the British Empire was at War on September 19th, 1918, shall be eligible for election as an Associate Member. The annual subscription of each Chamber Member shall be Rs. 300 per annum and of each Associate Member Rs. 225 per annum. Officials and others indirectly connected with the trade of the province, or who may have rendered distinguished service to the interests represented by the Chamber, may be elected by the Committee, either on their own motion or on the suggestion of two Members as Honorary Members of the Chamber. Honorary Members are not required to subscribe to the funds of the Chamber.

The Chamber undertakes arbitrations in addition to its ordinary work. It does not publish any statistical returns.

The following are the Officers, Committee and Representatives on public bodies for the current year:—

Chairman.—The Hon. Mr. E. J. Holberton, C.B.E., (The Bombay Burma Trading Corporation, Ltd.).

Vice-Chairman.—J. A. Swan, Esq. (Steel Bros. & Co., Ltd.).

Committee.—Messrs. D. A. Dalziel (Chartered Bank of India, Australia and China), A. R. Finlay (J. A. Begbie & Co.), J. Hogg (Harperink, Smith & Co.), J. R. D. Glascott (Burma Railways Co., Ltd.).

A. B. Ritchie (Burma Oil Co., Ltd.), P. B. Sime (Bulloch Brothers & Co., Ltd.), R. Sinclair (The Irrawaddy Flotilla Co., Ltd.), and G. W. Wilson (J. and F. Graham & Co.).

Secretary.—Mr. C. A. Cuttriss, M.B.E., F.R.S.A.

Representative on the Burma Legislative Council.—The Hon'ble Mr. E. J. Holberton, C.B.E.

Representatives on the Rangoon Port Trust

Board.—Messrs. The Hon'ble Mr. E. J. Holberton, C. B. E., Messrs. J. Hogg, A. B. Ritchie and J. A. Swan.

Representative on the Rangoon Municipal Committee.—Mr. G. W. Wilson.

Victoria Memorial Park Trustee.—The Hon'ble Mr. E. J. Holberton, C.B.E.

Pasteur Institute Committee.—The Hon'ble Mr. E. J. Holberton, C.B.E.

Burma Boiler Commission.—Mr. C. A. Cuttriss, M.B.E., F.R.S.A.

COCANADA.

The Cocanada Chamber of Commerce was established on 29th October, 1868.

The following are the office-holders of the Cocanada Chamber of Commerce, which has its headquarters at Cocanada, the chief port on the Coromandel Coast, north of Madras:—

Messrs. B. Eddington (Coromandel Co., Ltd.), *Chairman*; E. H. D'Cruz (Wilson & Co.), A. E. Todd (Simson Bros.), M. K. Ry. Rao Bahadur K. Suryanarayanamurti Naidu Garu and G. M. Lake (Innes & Co.), G. W. Thompson (Shaw Wallace & Co.), R. J. Hunter (Ripley and Co.), A. Steiner (Volkart Bros.), and G. K. Gillan (Gordon Woodroffe & Co.).

Secretary.—Mr. J. A. Muller.

The rules of the Chamber provide "that by the term 'member' be understood a mercantile firm or establishment, or the permanent agency of a mercantile firm or establishment, or a society of merchants carrying on business in Cocanada, or other place in the Districts of Kistna, Godavari, Vizagapatam, and Ganjam, and duly elected according to the Rules of the Chamber, and that all such be eligible, but only members resident in Cocanada can hold office."

Members are elected by ballot. The Committee, when called upon by disputing members or non-members of the Chamber, give their decision upon all questions of mercantile usage and arbitrate upon any commercial matter referred to them for final judgment. In the former case a fee of Rs. 16 and in the latter a fee of Rs. 32 must accompany the reference.

The Committee consist of 3 members, including the Chairman, and the Committee are elected by ballot, the Chairman at the general meeting of January in each year, for a term of 12 months. The entrance fee for each member whose place of business is in Cocanada is Rs. 50 and for each member whose place of business is elsewhere be Rs. 25. The subscription for each member whose place of business is in Cocanada is Rs. 120 per annum, and for each member whose place of business is elsewhere be Rs. 60 per annum, payable quarterly in advance. Committee meetings are held on the 1st Tuesday in the month and general meetings on the 2nd Tuesday.

A weekly slip of current rates of produce freights, and exchange is drawn up by the Committee.

CEYLON.

The Ceylon Chamber of Commerce was established on the 25th March 1839 and was incorporated in 1895, with its headquarters at Colombo. All firms and persons engaged in the general trade of Ceylon are admissible as members and every person or firm desirous of joining the Chamber must be proposed by one member, seconded by another and ballotted for by the whole Chamber. The affairs of the Chamber are conducted by a Board of

Directors consisting of Chairman and Vice-Chairman and from 5 to 10 members.

The following is the membership of this Board at the present time:—

Mr. F. E. Mackwood (*Chairman*); Mr. S. P. Hayley (*Vice-Chairman*); Mr. B. W. Leefe, Mr. F. N. Mackie, Mr. W. Philips, Mr. A. D. Skrine, Mr. E. R. Waldoek, Mr. F. H. Yeats.

Secretary.—Mr. A. Duncum.

THE INDIAN INDUSTRIAL CONFERENCE.

The credit of conceiving the idea of organizing an Indian Industrial Conference under the auspices of the Industrial Association of Western India belongs to the late Mr. M. G. Ranade. Discussion of questions relating to agriculture, finance, commerce and industry of the whole country by inviting experts in different branches, the formation of well informed public opinion on economical problems were the objects kept by Mr. Ranade

in view in convening this meeting. The first session of the Conference was held at Poona in August 1891, under the Presidency of Captain Beaucherk of Hyderabad and was attended by distinguished European and Indian gentlemen. Two more sessions of the Conference were held in 1892 and 1893. But owing to the elevation of Mr. M. G. Ranade to the High Court and his transfer to Bombay, this movement came virtually to a standstill,

until it was revived in 1905. The National Congress almost since its inception has given prominent attention to some of the principal economic questions and the famines of 1896-97 and 1899-1900 contributed not a little to push the economical problem to the forefront and resulted in the organization of three or four Industrial and Agricultural exhibitions between 1900 and 1905 under the auspices of the National Congress, which gave the people an opportunity to take stock of their gains and losses in the field of arts and industries and opened their eyes to their industrial backwardness. Small committees were appointed at these exhibitions to devise means for the revival of existing industries and also for the starting of new ones.

In the year 1905 the exhibition Committee of Benares took the important step of reviving the Industrial Conference organization. The first session was accordingly held under the distinguished presidency of the late Mr. R. C. Dutta. During the last fourteen years of its existence, this conference has been fortunate in securing very able and influential gentlemen to occupy the Presidential Chair.

CONSTITUTION—The objects of the Conference as laid down in its revised constitution are as follows :—

AIMS & OBJECTS.—The Indian Industrial Conference shall attempt to promote, protect and develop agriculture, commerce, manufactures and trade of India, on sound lines and to introduce new industries wherever possible.

(a) By holding Conferences and meetings to deliberate upon and discuss the economic, agricultural and industrial needs and problems affecting the whole country.

(b) By collecting correct statistics and other information on the above subjects.

(c) By disseminating the information so collected through the medium of books, pamphlets or leaflets.

(d) By organising, wherever possible, temporary or permanent exhibitions, demonstrations, museums, or laboratories for conducting experiments.

(e) By encouraging the study of commerce, technology and economics.

(f) By making representations to the various departments of British Government, to the Railway Companies, the Rulers of Indian States and Industrial and Commercial bodies or Associations on all matters pertaining to or bearing on agriculture, manufactures, trade and commerce of the country.

(g) By the formation of industrial and commercial Associations in the various parts of the country, where they are non-existent.

In pursuance of these objects, 14 sessions of the Conference have been held along with the annual Congress meetings. The Report of each session contains the proceedings and the papers submitted to each Conference and covers over 500 pages of closely printed matter. The office also has compiled the following books :—The Directory of Indian Goods and Industries (6th Edition) containing the names and addresses of manufacturers of and

dealers in the Indian made goods, Indian Banks, etc. The Directory of Technical Institutions in India (2nd edition) gives the fees charged and other particulars relating to Agricultural, Commercial and Technical schools and colleges in India. The Guide to Modern Machinery gives the addresses of makers of machinery for starting three hundred different industries.

In addition to the educative work, the office fulfils the functions of a **Bureau of Economic Intelligence**. Inquiries of the following nature are received in the office. Small capitalists and gentlemen of limited means seek the advice of the Central Office for starting small cottage industries, which do not require a large outlay of money or the use of expensive or intricate machinery. Persons wishing to start soap or candle works, varnish making and similar chemical industries, ask for an estimate of the cost of machinery and plant for these different concerns, as well as rates for the chemicals required by them and the names of the firms from whom they can obtain the supplies. Advice is sometimes sought by Indian States and private individuals anxious to start plantations of Ramie, and other fibre producing plants and the cultivation of Rubber and other economic products. Parents and guardians of students have addressed the Office for information in connection with institutions both in India and in foreign countries, where the young men can get training suited to them in Electrical Engineering and other technical courses. Information is also supplied regarding Indian experts in various branches. Small concerns which have already commenced to place their goods in the market, expect the Office of the Industrial Conference to help them in pushing forward the sale of their goods by prevailing upon well-known merchants, to help them by guaranteeing the purchase of their goods up to a certain quantity every year.

The Conference wishes to take in hand the following projects :—

(1) To compile a list of Indian as well as of foreign experts, who by their training either here or in foreign countries and practical experience in different Industrial and Manufacturing branches are capable of rendering assistance to the capitalists and others intent on starting any new industry, or reviving old or existing concerns requiring expert aid.

(2) To organize a Commercial Museum at Bombay to display samples of indigenous and foreign industrial products, models of machinery, raw materials and artware.

The fees for different classes of Memberships will be as shown below commencing with the year 1919 :—

		Rs.
Patron ..	..	1,000 or above.
Life Member ..	..	250 ..
Donors ..	..	50 ..
Ordinary member ..	..	10.

Honorary Joint Secretaries.—

Rao Bahadur R. N. Mudholkar, C. I. E., Mr.

Ambalal Sarabhai, Mr. J. K. Mehta, M. A.

Assistant Secretary—Mr. M. B. Sant.

Office—23, Church Gate Street, Fort, Bombay.

* The Peoples of India.

It is essential to bear in mind, when dealing with the people of India, that it is a continent rather than a country. Nowhere is the complex character of Indians more clearly exemplified than in the physical type of its inhabitants. No one would confuse the main types, such as Gurkhas, Pathans, Sikhs, Rajputs, Burmans, Nagas, Tamils, etc., nor does it take long to carry the differentiation much farther. The typical inhabitants of India—the Dravidians—differ altogether from those of Northern Asia, and more nearly resemble the tribes of Malaya, Sumatra and Madagascar. Whatever may be their origin, it is certain that they have settled in the country for countless ages and that their present physical characteristics have been evolved locally. They have been displaced in the North-West by successive hordes of invaders, including Aryans, Scythians, Pathans and Moghals, and in the North-East by Mongoloid tribes allied to those of Burma, which is India only in a modern political sense. Between these foreign elements and the pure Dravidians is borderland where the contiguous races have intermingled.

The people of the Indian Empire are divided by Sir Henry Risley (Caste, Tribe and Race, Indian Census Report, 1901: the Gazetteer of India, Ethnology and Caste, Volume I, Chapter 6) into seven main physical types. There would be eight if the Andamenes were included, but this tiny group of Negritos may be disregarded.

The Turko-Iranian, represented by the Baloch, Brahui and Afghans of Baluchistan and the North-West Frontier Province. Probably formed by a fusion of Turki and Persian elements, in which the former predominate. Stature above mean; complexion fair; eyes mostly dark but occasionally grey; hair on face plentiful; head broad, nose moderately narrow, prominent, and very long. The feature in these people that strikes one most prominently is the portentous length of their noses, and it is probably this peculiarity that has given rise to the tradition of the Jewish origin of the Afghans.

The Indo-Aryan occupying the Punjab, Rajputana, and Kashmir, and having as its characteristics members the Rajputs, Khattris, and Jats. This type, which is readily distinguishable from the Turko-Iranian, approaches most closely to that ascribed to the traditional Aryan colonists of India. The stature is mostly tall; complexion fair; eyes dark; hair on face plentiful, head long; nose narrow, and prominent, but not specially long.

The Scytho-Dravidian, comprising the Maratha Brahmans, the Kunbis, and the Coorgs of Western India. Probably formed by a mixture of Scythian and Dravidian elements. This type is clearly distinguished from the Turko-Iranian by a lower stature, a greater length of head, a higher nasal index, a shorter nose, and a lower orbito-nasal index. All of these characters, except perhaps the last, may be due to a varying degree of intermixture with the Dravidians. In the higher groups the amount of crossing seems to have been slight; in the lower the Dravidian elements are more pronounced.

The Aryo-Dravidian or Hindustani, found in the United Provinces, in parts of Raj-

putana, and in Bihar and represented in its upper strata by the Hindustani Brahman and in its lower by the Chamar. Probably the result of the intermixture, in varying proportions, of the Indo-Aryan and Dravidian types. The head-form is long with a tendency to medium; the complexion varies from lightish brown to black; the nose ranges from medium to broad, being always broader than among the Indo-Aryans; the stature is lower than in the latter group, and usually below the average according to the scale. The higher representatives of this type approach the Indo-Aryans, while the lower members are in many respects not very far removed from the Dravidians. The type is essentially a mixed one, yet its characteristics are readily definable, and no one would take even an upper class Hindustani for a pure Indo-Aryan or a Chamar for a genuine Dravidian. The distinctive feature of the type, the character which gives the real clue to its origin and stamps the Aryo-Dravidian as racially different from the Indo-Aryan is to be found in the proportions of the nose.

The Mongolo-Dravidian, or Bengali type of Lower Bengal and Orissa, comprising the Bengal Brahmans and Kayasthas, the Mahomedans of Eastern Bengal, and other groups peculiar to this part of India. Probably a blend of Dravidian and Mongoloid elements, with a strain of Indo-Aryan blood in the higher groups. The head is broad; complexion dark; hair on face usually plentiful; stature medium; nose medium, with a tendency to broad. This is one of the most distinctive types in India, and its members may be recognised at a glance throughout the wide area where their remarkable aptitude for clerical pursuits has procured them employment. Within its own habitat the type extends to the Himalayas on the north and to Assam on the east, and probably includes the bulk of the population of Orissa; the western limit coincides approximately with the hilly country of Chota Nagpur and Western Bengal.

The Mongoloid, type of the Himalayas, Nepal, Assam, and Burma, represented by the Kanets of Lahul and Kulu; the Lepchas of Darjeeling and Sikkim; the Limbus, Murmis and Gurungs of Nepal; the Bodo of Assam; and the Burmese. The head is broad; complexion dark, with a yellow tinge; hair on face scanty; stature short or below average; nose fine to broad; face characteristically flat; eyelids often oblique.

The Dravidian type extending from Ceylon to the valley of the Ganges, and pervading Madras, Hyderabad, the Central Provinces, most of Central India and Chota Nagpur. Its most characteristics representatives are the Paniyans of Malabar and the Santals of Chota Nagpur. Probably the original type of the population of India, now modified to a varying extent by the admixture of Aryan, Scythian, and Mongoloid elements. In typical specimens the stature is short or below mean; the complexion very dark, approaching black; hair plentiful, with an occasional tendency to curl; eyes dark; head long; nose very broad, sometimes depressed at the root, but not so as to make the face appear

* The material in this section is almost entirely taken from the Report on the Census of India, 1911, by Mr. E. A. Gait, C.S.I., C.I.E., I.C.S., Fellow of the Royal Statistical Society.

GROWTH OF THE INDIAN POPULATION.

	1911.	1901.	1891.	1881.	1872.
INDIA	315,156,396	294,361,056	287,314,671	253,896,330	206,162,360
PROVINCES	244,207,542	231,605,940	221,240,836	198,882,817	185,163,435
Ajmer-Merwara	501,395	475,912	542,358	460,722	396,331
Andamans and Nicobars	26,459	24,649	15,609	14,628	....
Assam	6,713,635	5,841,878	5,477,302	4,907,792	4,150,769
Baluchistan	414,412	382,106	....	....	....
Bengal	45,483,077	42,141,477	39,089,632	36,316,728	34,119,465
Bihar and Orissa	34,490,084	33,242,783	32,876,557	30,988,320	26,486,482
Bihar	23,752,969	23,360,212	23,581,588	22,418,367	19,735,627
Orissa	5,131,753	4,982,142	4,666,227	4,343,964	3,603,156
Chota Nagpur	5,605,362	4,500,429	4,628,792	4,225,989	3,147,699
Bombay (Presidency)	19,672,642	18,559,650	18,878,471	16,494,538	16,301,362
Bombay	16,113,042	15,304,766	15,959,282	14,042,621	14,075,508
Sind	3,513,435	3,210,910	2,875,100	2,875,100	2,206,565
Aden	46,165	43,974	44,079	34,860	19,289
Burma	12,115,217	10,490,624	7,722,053	8,736,771	2,747,148
Central Provinces and Berar	13,916,308	11,971,452	13,048,972	11,943,363	9,951,268
Central Provinces	10,859,146	9,217,436	10,151,481	9,270,690	7,723,614
Berar	3,057,162	2,754,016	2,897,491	2,672,673	2,227,654
Coorg	174,976	180,607	173,055	178,302	168,312
Madras	41,405,404	38,229,654	35,644,428	30,841,154	31,230,622
North-West Frontier Province (Districts and Admin- istered Territories).	2,196,933	2,041,534	1,857,519	1,575,943	17,609,672
Punjab	19,974,956	20,330,337	19,009,368	17,274,597	17,609,672
United Provinces of Agra and Oudh	47,182,044	47,692,277	46,905,512	44,149,959	42,002,004
Agra	34,624,040	34,859,109	34,254,388	32,762,127	30,780,961
Oudh	12,558,004	12,833,168	12,650,924	11,387,832	11,221,043

flat. This race, the most primitive of the Indian types, occupies the oldest geological formation in India, the medley of forest-clad ranges, terraced plateau, and undulating plains which stretches roughly speaking, from the Vindhya to Cape Comorin. On the east and the west of the peninsular area the domain of the Dravidian is continuous with the Ghats, while further north it reaches on one side to the Aravallis, and on the other to the Rajmahal Hills. Where the original characteristics have been unchanged by contact with Indo-Aryan or Mongoloid people, the type is remarkably uniform and distinctive. Labour is the birthright of the pure Dravidian whether hoeing tea in Assam, the Duars, or Ceylon, cutting rice in the swamps of Eastern Bengal or doing scavenger's work in the streets of Calcutta, Rangoon and Singapore, he is recognizable at a glance by his black skin, his squat figure, and the negro-like proportions of his nose. In the upper strata of the vast social deposit which is here treated as Dravidian these typical characteristics tend to thin and disappear, but even among them traces of the original stock survive in varying degrees.

It must, however, be clearly understood that the areas occupied by these various types do not admit of being defined as sharply as they must be shown on an ethnographic map. They melt into each other insensibly; and, although at the close of a day's journey from one ethnic tract to another, an observer whose attention had been directed to the subject would realise

clearly enough that the physical characteristics of the people had undergone an appreciable change, he would certainly be unable to say at what particular stage in his progress the transformation had taken place.

Contrasts.—The linguistic survey has distinguished in India about a hundred and thirty indigenous dialects belonging to six distinct families of speech. In the domain of religion, though the bulk of the people call themselves Hindus, there are millions of Mahomedans, Animists, Buddhists, Jains, Sikhs, and Christians. So also in respect of social customs. In the north near relatives are forbidden to marry; but in the south cousin marriage is prescribed and even closer alliances are sometimes permitted. As a rule, female chastity is highly valued, but some communities set little store by it, at any rate prior to marriage, and others make it a rule to dedicate one daughter to a life of religious prostitution. In some parts the women move about freely; in others they are kept secluded. In some parts they wear skirts; in others trousers. In some parts again wheat is the staple food; in others rice, and in others millets of various kinds. All stages of civilisation are found in India. At one extreme are the land-holding and professional classes, many of whom are highly educated and refined; at the other various primitive aboriginal tribes such as the head-hunting Nagas of Assam and the leaf-clad savages of the southern hills who subsist on vermin and jungle products.

MAIN STATISTICS OF THE INDIAN EMPIRE.

According to the revised areas adopted in the Census of 1911, the Indian Empire contains 1,802,657 square miles, or some 36,000 more than in 1901. About 23,000 square miles have been added owing to the enumeration for the first time of the Agency tracts attached to the North-West Frontier Province. A further 6,500 represent the area of the Sunderbans, or swampy littoral of the Ganges delta, which was left out of account at previous enumerations. Finally the Frontier State of Manipur has been found to contain about 5,000 square miles more than the estimate made in 1901.

Population Divisions.—The provinces under British administration comprise 1,093,074 square miles, or 60·6 per cent of the total. The remainder is included in the Native States. The total population is 315,156,396, of which British territory contains 244,267,542, or 77·5 per cent. and the Native States 70,888,854 or 22·5 per cent.

Comparisons with Europe.—These stupendous figures can be grasped only by contrast. The Indian Empire is equal to the whole of Europe, except Russia. Burma is about the same size as Austria-Hungary; Bombay is comparable in point of area with Spain; Madras, the Punjab, Baluchistan, the Central Provinces and Berar and Rajputana are all larger than the British Islands; the United Provinces and Bihar are Orissa than Italy; and Hyderabad and Kashmir than Great Britain excluding Yorkshire.

The population of India exceeds that of Europe without Russia, and is considerably more than three times that of the United States of America. The United Provinces and Bengal, with the States attached to them, both have as many inhabitants as the British Islands, Bihar and

Orissa as France, Bombay as Austria, and the Punjab as Spain and Portugal combined. The population of the Central Provinces and Berar approaches that of Brazil; Hyderabad and Burma have as many inhabitants as Egypt; Central India and Rajputana as Scotland and Ireland combined; and Assam as Belgium.

Density.—In the whole Empire there are on the average 175 persons to the square mile, or much the same as Europe outside Russia. In British territory the number to the square mile is 223 and in the Native States 100; the former figure exceeds by 34 the density ratio in France and the latter is identical with that in Spain.

There are great local variations in density. In nearly two-thirds of the districts, and States, the number of persons to the square mile is less than 200, and in about a quarter it ranges from 200 to 500. The units with less than 100 persons to the square mile covers two-fifths of the total area, but contains only one-eleventh of the population.

Causes of Density.—The productiveness of the soil is the main factor in determining the density of the Indian people. The most thickly peopled tracts are the level plains where practically every inch of the land is fit for tillage. This is notably the case in Bengal and Bihar and the United Provinces East. The next most densely peopled tracts are the low-lying plains along the sea coast in the southern part of the peninsula. In the United Provinces West and the Punjab East the configuration of the surface is equally favourable; the rainfall is more scanty and less

	1911.	1901.	1891.	1881.	1872.
STATES AND AGENCIES					
Assam State (Manipur)	70,888,854	62,755,116	66,073,835	55,013,513	20,998,925
Batuchistan States	346,222	284,465	....	221,070	....
Baroda State	420,291	428,640	....	....	....
Bengal States	2,032,798	1,952,692	2,415,396	2,182,158	1,997,598
	822,565	740,299	716,310	698,261	567,827
Bihar and Orissa States	3,945,209	3,314,474	3,028,018	2,410,611	1,723,900
Bombay States	7,411,675	6,908,559	8,081,950	6,937,893	6,797,970
Central India Agency	9,356,980	8,497,805	10,136,403	9,261,907	....
Central Provinces States	2,117,002	1,631,140	1,712,562	1,387,294	928,116
Hyderabad State	13,374,676	11,141,142	11,537,040	9,845,594	....
Kashmir State	3,158,126	2,905,578	2,543,952	....	....
Madras States	4,811,841	4,188,086	3,700,622	3,344,849	3,289,392
Mysore State	5,806,193	5,539,399	4,943,604	4,186,188	5,055,402
N.-W. F. Province (Agencies and Tribal areas)	1,622,094	83,962	....	....	....
Punjab States	4,212,794	4,424,398	4,263,280	3,861,683	....
Rajputana Agency	10,580,432	9,853,366	12,171,749	9,934,255	....
Sikkim State	87,920	59,014	30,458	....	....
United Provinces States	832,036	802,097	792,491	741,750	638,720

regular; but it is supplemented in many parts by water from the canals. The natural divisions which contain the coast districts of Orissa and north Madras, with a rainfall of 50 inches, has a relatively low mean density, but this is because it includes on the west a considerable hilly area, while on the east near the sea the ground is swampy and impregnated with salt. In the intermediate strip, between the littoral and the hills, the density is as great as in parts of the lower Gangetic Plain. Want of water is the main explanation of the comparatively sparse

population in several more or less level tracts such as Gujarat, Rajputana East and Central India West, and the North-West dry-area. In Assam there are extensive tracts of hill and jungle and sandy stretches in the strath of the Brahmaputra River, where permanent cultivation is out of question. The agricultural returns show that three-quarters of the whole area is cultivable but this simply means that crops of some kind can occasionally be grown. The proportion of the area fit for permanent cultivation must be less than half that shown in the returns.

TOWNS AND VILLAGES.

The definition of a town in the Indian census statistics includes every municipality; all Civil Lines not included within municipal limits; every cantonment; every other continuous collections of houses inhabited by not less than 5,000 persons, which may be treated as a town for census purposes. Only 9·5 per cent. of the population of India are found in towns as defined above, compared with 78·1 per cent. in England and Wales and 45·6 per cent. in Germany. Rather more than half the urban population of India is found in towns containing upwards of 20,000 inhabitants, about one-fifth in towns with from ten to twenty thousand, and the same proportion in those with from five to ten thousand; the remainder, about one-fifteenth, live in towns with less than five thousand. The tendency to urban aggregation is most marked in the west of India and least so in the north-east. The proportion of the urban to the total population in the main provinces ranges from 18 per cent. in Bombay to only 3 per cent. in Assam. The urban population of Upper India is much larger than it otherwise would be, because of the numerous old capitals which are found there. In the future the main factors will be the expansion of trade and industrial development.

Sex in Towns.—In respect of the distribution by sex, the urban population in India presents a striking contrast to that of European countries. In Europe the proportion of females is larger in towns than in the general population, but in India it is considerably smaller, and the number of females per thousand males is only 847, compared with 953 in the population as a whole. The reason is that in this country the great majority of the domestic servants, shop hands and factory employes are males. The disproportion is most marked in large trading and industrial centres where the number of immigrants is large. In Calcutta, for example, the foreign-born population contains only 357 females per thousand males.

Religion in Towns.—Of the Parsis no fewer than six out of every seven are resident in towns; of the Jains, the proportion is nearly one-third; and of the Christians more than one-fifth. There is a marked contrast between these proportions and those for Hindus and Mahomedans who form the bulk of the population. Of the Mahomedans less than one-eighth, and of the Hindus less than one-eleventh, reside in towns. In the case of the former the proportion rises to one-sixth if we exclude the figures for Bengal, where the majority of the Mahomedans are the descendants of local converts. Amongst the Hindus the higher castes have hitherto shown a greater predilection

for town-life than the lower, but the disproportion is gradually disappearing; modern industrial developments are attracting the lower castes to towns in ever-increasing numbers.

Urban and Rural.—The proportion of the urban to the total population has fallen during the decade from 9·9 to 9·5 per cent. The main explanation of this is undoubtedly the fact that plague has been far more prevalent in town than in rural areas. This scourge has now spread to all parts of the Empire except the east and south. At the time of the census an epidemic was raging in many towns, especially in those of the United Provinces, Central India and the Central Provinces and Berar, and a large number of the regular inhabitants had gone away. In addition, however, to driving people away, plague has been responsible in many towns for a terribly heavy mortality. It is impossible to make any estimate of the direct and indirect effects of plague on the growth of towns, but it is quite certain that they have been enormous.

Urban Tendencies.—We cannot draw any conclusions as to the tendency to urban aggregation from a comparison of the statistics of the present census with those of the previous one, when plague was still a new and more or less local visitation, but there can be no doubt that there is a growing tendency for people to congregate in towns of a certain kind. The introduction of machinery is rapidly causing the old cottage industries to be replaced by mills and factories; and these are necessarily located at those places where there are the best facilities for collecting the raw material and distributing the manufactured article. The jute industry is practically confined to the banks of the Hooghly near the port of Calcutta. Cotton mills are found chiefly in Western India and woollen and leather factories at Cawnpore and Delhi. The increasing trade of the country and the improvements in railway communications also encourage the growth of towns. Not only are the great seaports attracting an ever-growing population, but various inland towns are benefiting from the same cause. The extent to which modern conditions of trade and industry are causing the growth of towns is obscured not only by plague, which is generally far more prevalent in towns than in rural areas, but also by the decay of old centres of population, which owed their importance to past political and economic conditions. Throughout India there are many former capitals of defunct dynasties whose population is steadily dwindling. During the last ten years, Mandalay, the last capital of the kings of Ava, has lost a quarter of its population.

SUMMARISED GROWTH OF THE INDIAN POPULATION.

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. Increase (+), Decrease (-).
INDIA	+20,795,340	+7,046,385	+33,418,341	+47,733,970	+108,994,036
PROVINCES	+12,661,602	+10,365,104	+22,358,019	+13,719,382	+59,104,107
Almer-Merwara	+24,483	-65,446	+81,636	+64,391	+105,064
Andamans and Nicobars	+1,810	+9,040	+981	....	....
Assam	+871,757	+364,576	+569,510	+757,023	+2,562,866
Baluchistan	+32,306	....	....	....	....
Bengal	+3,341,600	+3,051,845	+2,772,904	+2,197,263	+11,363,612
Bihar and Orissa	+1,247,301	+366,226	+1,888,237	+4,501,838	+8,003,602
Bihar	+392,757	-221,326	+1,163,171	+2,682,740	+4,017,342
Orissa	+149,611	+315,915	+322,263	+740,308	+1,528,597
Chota Nagpur	+704,933	+271,637	+402,803	+1,078,290	+2,457,663
Bombay (Presidency)	+1,112,992	-318,821	+2,383,983	+193,176	+3,371,280
Bombay	+808,276	-654,526	+1,916,071	-32,887	+2,037,534
Sind	+302,525	+335,810	+458,043	+210,492	+1,306,870
Aden	+2,191	-105	+9,219	+15,571	+26,876
Burma	+1,624,593	+2,768,571	+3,985,282	+989,623	+9,368,069
Central Provinces and Berar	+1,944,856	-1,077,520	+1,105,609	+1,992,095	+3,965,040
Central Provinces	+1,641,710	-934,045	+880,791	+1,547,076	+3,135,532
Berar	+303,146	-143,475	+224,818	+445,019	+820,508
Coorg	-5,631	+7,552	-5,247	+9,990	+6,664
Madras	+3,175,750	+2,585,226	+4,803,274	-389,468	+10,174,782
North-West Frontier Province (Districts and Administered Territories).	+155,399	+184,015	+281,576	+1,240,868	+4,562,217
Punjab	-355,381	+1,320,969	+1,734,771	....	....
United Provinces of Agra and Oudh	-510,233	+786,765	+2,755,553	+2,147,955	+5,180,040
Agra	-235,069	+604,521	+1,492,461	+1,981,166	+3,843,079
Oudh	-275,164	+182,244	+1,263,092	+166,789	+1,336,961

CITIES.

The general practice of statisticians is to treat as cities only those places which have a population of more than 100,000. According to this standard there are in India only 30 cities, with a population of 7,075,782, or 2.2 per cent. of the population. Here there is an extraordinary difference between the Indian conditions and those of Western countries. In England the cities contain 45 per cent. of the total population, in Germany 21, and in France 14 per cent. But even in these countries the growth of cities is comparatively recent. In 1871 England had only 27 cities with 9.5 million inhabitants and Germany only 8 with 2 millions. There are signs that in India the growth will be more rapid in the future than it has been. The population of cities has risen since 1872 by 64 per cent. and the net increase, comparing like with like, is 43 per cent. The most rapid growth during this period is shown by Rangoon which has trebled its population. Next comes Karachi with an increase of 163 per cent. and then Madura and Howrah with 158 and 113 per cent. respectively. Since 1901, two new places, Jubbulpore and Dacca, have entered the list of cities, while Baroda has disappeared from it. Eighteen cities have gained, and twelve have lost, population. Of the latter, a few like Mandalay are really decadent, but in most, such as Nagpur and Cawnpore, the loss was due wholly to the temporary influence of plague. The progressive cities are differentiated from those which are decadent by their large immigrant population. In Bombay, Calcutta and Howrah this exceeds 70 per cent. of the total and in Rangoon and Karachi it is close on 60 per cent. In Patna, Mandalay and Bareilly, on the other hand, it is barely 10 per cent.

Calcutta.—In speaking of Calcutta we may mean Calcutta proper, or the area administered by the Calcutta Municipal Corporation with the port, fort and canals, the population of which is 896,067, or this area plus the suburban municipalities of Cossipur-Chitpore, Manicktola and Garden Reach with 1,04,3307 inhabitants, or lastly Greater Calcutta, which also includes Howrah, with an aggregate population of 1,222,313. The suburban municipalities differ from Calcutta only in respect of their Municipal Government. From a structural point of view they cannot be distinguished. The buildings are continuous throughout, and there is nothing to show where one municipality begins and the other ends. A striking feature of the statistics is the large number of immigrants. Less than 29 per cent. of the inhabitants of Calcutta proper claim it as their birthplace. The vast majority are immigrants, of whom 204,000 come from Bihar and Orissa and 90,000 from the United Provinces. Of the Bengal districts, the largest contributions are those from the 24 Parganas (88,000), Hooghly (48,000) and Midnapur (29,000). The volume of immigration is equally great in the suburbs and Howrah.

The first regular census of Calcutta proper taken in 1872 showed a population of 633,009. In 1881 there was practically no change, but in 1891 a gain of 11.4 per cent. was recorded. In 1901 there was a further increase of 24.3 per cent., but part of this was due to improved enumeration. At the present census the rate of increase in Calcutta proper has dropped to 5.7

per cent. The falling off is due largely to the growing tendency of the inhabitants to make their home in the suburbs or even further afield. The suburban municipalities have grown during the decade by 45.3 per cent.

Bombay—which has now a population of 979,445 was a petty town with about ten thousand inhabitants when it passed into the possession of the British in 1661. The population was estimated to be 100,000 in 1780, 180,000 in 1814 and 236,000 in 1836. At the first regular census in 1872 it had risen to 644,405, and nineteen years later, in 1891, it was 821,764. In the next decade plague, which first appeared in September 1896, caused a serious set back; and it is estimated that by 1901 this disease had already been responsible for 114,000 deaths. The census of that year showed a decrease of about 6 per cent., but this was not wholly due to deaths. At the time when the census was taken, a virulent epidemic was in progress, and large numbers of the permanent residents had sought safety in flight. A fresh enumeration taken in 1906 by the Health Department of the Municipality gave a population of 959,537. The number now returned exceeds that of 1901 by 26 per cent. but it is only 2 per cent. more than it was at the time of the local enumeration of 1906. It is said that the census of 1911 was taken at a time when many of the immigrants from neighbouring districts had gone to their permanent homes for the Holi holidays, and that many of the cotton mills had closed down temporarily owing to the prohibitive price of the raw material. Like other large trading and industrial centres, Bombay is peopled mainly by immigrants; and more than 80 per cent. of its inhabitants were born elsewhere. Most of them come from the neighbouring districts; more than one-fourth of the total number are from Ratnagiri, while four other districts together supply more than a third. There are 30,000 Goanese, most of whom are in domestic service. Of the immigrants from outside the province, some 50,000, chiefly mill hands, are from the United Provinces, and 12,000 mainly shopkeepers, from Rajputana. Of the immigrants from outside India the largest number (6,000) come from the United Kingdom.

Madras.—Unlike Calcutta and Bombay, Madras, which is handicapped by its distance from the coal-fields, has but few large industries. The indigenous handicrafts are decaying and their place is not being taken by factories of the modern type. Apart from its being the headquarters of the Local Government, Madras owes whatever importance it possesses to its position as a distributing centre. Of its total population (518,660), only one-third are immigrants, and of these only 12 per cent. have come from places beyond the limits of the Madras Presidency. The great majority are natives of the four districts in the immediate vicinity of the city.

The population grew fairly rapidly during the twenty years prior to 1901, but since then it has been almost stationary. There has been an increase of about one per cent. in the number of persons born in the city, but fewer of them

	1901 to 1911.	1891 to 1901.	1881 to 1891.	1872 to 1881.	Net variation in period 1872 to 1911. increase (+), Decrease (-).
STATES AND AGENCIES					
Assam State (Manipur)	+3,133,738	-3,318,719	+11,060,322	+49,889,929
Baluchistan States	+61,757	....	....	....
Baroda State	-8,349	....	....	....
Bengal States	+80,106	-462,704	+233,233	+35,200
Bihar and Orissa States	+82,266	+23,989	+18,049	+254,738
Bombay States	+630,735	+236,456	+617,407	+2,221,309
Central India Agency	+503,116	-1,173,391	+1,144,057	+613,705
Central Provinces States	+859,175	-1,638,598	+874,496	....
Hyderabad State	+485,862	-81,422	+325,268	+1,188,886
Kashmir State	+2,232,534	-395,898	+1,691,446	....
Madras States	+252,548	+361,626	....	....
Mysore State	+623,755	+487,464	+355,773	+1,522,449
N.-W. F. Province (Agencies and Tribal areas)	+266,794	+595,795	+757,416	+750,791
Punjab States	+1,538,132	....	....	....
Rajputana Agency	-211,604	+161,118	+401,597	....
Sikkim State	+677,066	-2,318,383	+2,227,494	....
United Provinces States	+28,906	+28,556	....	....
	+29,939	+9,606	+50,741	+193,316

have been enumerated within the city limits. As compared with 1901 the net gain due to migration is less than 9,000. It is possible that the great demand for labour in Burma, where wages are very high, has attracted many of the labouring classes who would otherwise have sought their living in Madras.

HOUSES AND FAMILIES.

Generally speaking it may be said that the labouring classes in India live in one, or at the most two, single room huts. The home of a well-to-do peasant consists of a public sitting room and a cook room and several apartments which are arranged round and open on to a courtyard. In spite of the joint family system the number of houses corresponds very closely to the number of families in the European sense. The total number of houses is 63·7 million, and there are 64·6 million married females aged 15 and over. Except amongst the higher castes who

Hyderabad.—Next to the three Presidency towns, the largest city in India is Hyderabad, the capital of the Nizam's Dominions. Its population is shown in the local Census Report as 500,623. Hyderabad has hitherto made very little industrial progress, and less than a quarter of its population is drawn from outside.

form but a small fraction of the total population the joint family system is not nearly so common as is frequently supposed. Where it is in vogue, there is often a strong disruptive tendency. In the towns and cities, owing to the high rents, the unit for all below the middle class is the room, not the house.

Average population per house

1881	..	..	..	..	..	5·8
1891	..	..	..	..	..	5·4
1901	..	..	..	..	..	5·2
1911	..	..	..	..	..	4·9

MOVEMENT OF THE POPULATION.

According to the census returns, the total population of India has increased by 7·1 per cent. during the last decade, and by 52·9 per cent. since 1872, but the real gain since the latter date is very much less than this. Large tracts of country, including the Central India and Rajputana Agencies, Hyderabad and the Punjab States, which were omitted from the census returns of 1872, were included in those of 1881. In 1891 the greater part of Upper Burma and Kashmir and several smaller units were enumerated for the first time. In 1901 the most important additions were a portion of Upper Burma and the greater part of Baluchistan. In 1911 the Agencies and tribal areas in the North-West Frontier Province, together with a few smaller areas, were included within the scope of the enumeration. The real increase in the population in the last 39 years is estimated at about 50 millions, or 19 per cent. This is less than half the increase which has taken place in the same period amongst the Teutonic nations of Europe, but it considerably exceeds that of the Latin nations. In France the population has grown by less than 7 per cent. since 1870, but this is because of its exceptionally low birth-rate. In India the birth-rate is far higher than in any European country; and it is the heavy mortality especially amongst infants, which checks the rate of increase.

Famine and Disease.—In addition to the causes which ordinarily govern the movement of the population, India is subject to two special factors—famine and epidemic disease. The decade preceding the census of 1911 was free from widespread famines such as those of the preceding ten years. In 1907 there was a partial failure of the monsoon which was felt over a wide area, extending from Bihar to the Punjab and Bombay, and causing actual famine in the United Provinces and in a few districts elsewhere. Prices ruled high in most years and there was an extension of special crops, such as jute and cotton, which are more profitable to the cultivator than food grains. It was on the whole a period of moderate agricultural prosperity. From the point of view of public health, the census period would have been an average one, but for the ravages of plague. Breaking out in

Bombay in 1896, it has by March 1901 caused a recorded mortality of half a million. Since then it has continued its ravages, especially in Bombay and Upper India. The mortality from it rose from about a quarter of a million in 1901 to 1·3 millions in 1907. It fell below a quarter of a million in each of the next two years, but in 1910 it exceeded half a million. The total number of deaths from plague during the decade was nearly 6·5 millions of which over one-third occurred in the Punjab and two-fifths in the United Provinces and Bombay, taken together. The disease fortunately has failed to establish itself in Bengal, Assam, and on the East Coast and in the extreme south of the Peninsula. This however is only the recorded mortality; in time of epidemic the reporting agency breaks down and large numbers of deaths escape registration. Plague attacks women more than men, and people in the prime of life more than the young and old. If plague is omitted, and it is assumed that the mortality of the decade would otherwise have remained normal, the population of the census of 1911 would have been greater than it was by at least 6·5 millions. In other words, the population would have increased by 9·3 instead of 7·1 per cent.

General Conclusions.—The most noticeable feature is the continuous rapid growth in Burma. Lower Burma has grown by 135 per cent. since 1872 and the whole Province including Upper Burma, which was annexed in 1886, by 37 per cent. since 1891. In Assam including Manipur the increase since 1872 amounts to 70 and in the Central Provinces and Berar to 47 per cent. In the other main provinces the rate of growth has been much slower. In some provinces, such as Burma, Assam and Bengal there has been continuous progress but others, at some time or another, have sustained a set-back. In the larger provinces at least, the internal variations are also frequently considerable. In Bengal one district has at the present time a smaller population than it had in 1872, while four others have more than doubled their population since that date.

In British territory there has been a gain of 9·1 per cent. over about nine-tenths of the area,

	1911.	1901.	1891.	1881.	1872.
CALCUTTA AND FORT *	896,067	847,796	682,305	612,307	633,009
BOMBAY	979,445	776,006	821,764	773,196	644,405
MADRAS AND CANTONMENT ..	518,660	509,346	452,518	405,848	397,562
Agra and Cantonment ..	186,449	188,022	168,662	160,203	149,008
Almehabad and Cantonment ..	216,777	185,889	148,412	127,621	119,672
Allahabad and Cantonment ..	171,697	172,032	175,246	160,118	143,693
Amritsar and Cantonment ..	152,756	162,429	136,766	151,896	135,813
Bangalore Civil and Military Station †	100,484	89,599	100,081	98,540	81,810
Bareilly and Cantonment ..	129,462	133,167	122,837	115,138	104,633
Benares and Cantonment ..	203,804	213,079	223,373	228,573	178,300
Cawnpore and Cantonment ..	178,557	202,797	194,048	155,369	125,877
Dacca	108,551	89,733	81,585	78,369	68,595
Delhi and Cantonment ..	232,837	208,575	192,579	173,393	154,417
Howrah	179,006	157,594	116,606	90,813	84,069
Hyderabad and Cantonment ..	500,623	448,466	415,039	387,417	.....
Jalpur	137,098	160,167	158,787	142,578	.....
Jubbulpore and Cantonment ..	100,651	90,533	84,682	76,023	55,469
Karachi and Cantonment ..	151,903	116,663	105,199	73,560	56,753
Lahore and Cantonment ..	228,687	202,964	176,854	157,287	125,413
Lucknow and Cantonment ..	259,798	264,049	273,028	261,303	284,779
Madras	134,130	105,984	87,428	73,807	51,987
Mandalay and Cantonment ..	138,299	183,816	188,815	.....	.....
Meerut and Cantonment ..	116,227	118,129	119,390	99,565	81,386
Nagpur	101,415	127,734	117,014	98,299	84,441
Patna	136,153	134,785	165,192	170,654	158,900
Poona and Cantonment ..	158,856	153,390	161,390	129,751	118,886
Rangoon and Cantonment ..	293,316	245,430	182,080	134,176	98,745
Srinagar and Cantonment ..	126,344	122,618	118,960	.....	.....
Surat and Cantonment ..	114,868	119,306	109,229	109,844	107,855
Trichinopoly and Cantonment ..	123,512	104,721	190,609	84,449	76,530

* The above figures for Calcutta exclude the population of Cossipore-Chitpur, Manicktola and Garden Reach. These places have a separate Municipal administration, but for all practical purposes they form an integral part of Calcutta. So also does Howrah except that it lies on the opposite bank of the Hoogly. If the first-mentioned Municipalities be added, the population of Calcutta rises to 1,043,307. If Howrah also be included, it comes to 1,222,313.

† Bangalore City and Bangalore Civil and Military Station are structurally a single unit, but for the purpose of the census they have been treated as separate places.

with three quarters of the total population, and a loss of 5·3 per cent. in the remaining one-tenth of the area and one-fourth of the population. The contrast in different parts of the Native States is still more striking. The net increase of 10·3 per cent. is the outcome of a gain of 14·3 per cent. in four-fifths of the total area and population, coupled with a loss of 6·2 per cent. elsewhere. The relatively greater net increase in the Native States as compared with British territory is explained by the fact that many of the States suffered severely from famine in the previous decade when they sustained a net loss of 5 per cent., while British territory gained 4·7

per cent. Apart from this, in ordinary circumstances a comparatively high rate of increase is to be expected in the Native States, as they are, on the whole, more undeveloped than British territory, and contain a much larger proportion of cultivable waste land. The net increase in India as a whole during the last decade is the resultant of a gain of 10·3 per cent. in an area of 1,517,000 square miles, with a population of 245 millions and a present density of 162 to the square mile, and a loss of 5·5 per cent. in an area of 218,000 square miles with a population of 68 millions and a density of 312 to the square mile.

MIGRATION.

In India there are two currents of migration—minor and major. The chief of the minor movements is the custom, almost universal amongst Hindus, whereby parents seek wives for their sons in a different village from their own. Of the 26·5 million natives of India who were enumerated in a district other than that in which they were born, 16·5 millions, or 62 per cent. were born in a district adjoining that in which they were enumerated. The major currents of migration are governed by economic conditions. The most noticeable movements are the large streams of emigration from Bihar and Orissa, Madras, the United Provinces and Rajputana, and of immigration into Bengal, Assam and Burma. Owing to its fertile soil, Bengal is able to support practically the whole of its dense indigenous population by agriculture. It is necessary therefore to man the jute mills by imported labour, as also the tea gardens of Darjiling and Jalpaiguri and to draw the general labour supply from outside. In Bengal the net excess of immigrants over emigrants is close on 1,400,000. Of these about 236,000 are Natives of a district in Bihar and Orissa, or Assam, contiguous to the Bengal district in which they were enumerated. Assam and Burma are sparsely populated and the land available for cultivation being ample, very few of the indigenous inhabitants find it necessary to work for hire. The tea gardens of Assam and the rice mills and oil wells of Burma have to obtain their coolies elsewhere. In Assam 12·5 per cent. and in Burma 5 per cent. of the population are immigrants. On an average 51,000 labourers and dependants go each year to the tea gardens of Assam. In Burma, Madras supplies labourers for the rice-milling, oil and other industries, whilst many coolies flock into the province from Chittagong, chiefly for the rice harvest. The net loss to Bihar and Orissa on account of migration is about 1·5 millions. The United Provinces sustain a net loss of about 800,000 from migration, chiefly in the direction of Bengal. Madras being very backward from an industrial point of view, there is no great local demand for labour. At the same time there is an exceptionally large population of the "untouchable" castes, who have no scruples about seeking their livelihood oversea. It provides Ceylon with labour for its plantations, Burma with labour for its industries, and the Federated Malay States with labour for their rubber plantations. The enterprising Marwari traders of Rajputana have penetrated to all parts of India and are to be found in very important bazars throughout Bengal and even in Assam. Bombay is industrially more advanced than Bengal, but as its soil is less productive

there is a large local supply of labourers, chiefly from the southern coast strip called the Konkan. The United Provinces give more than four times as many labourers to Bengal as to Bombay. As for the migration between British India and Native territory, it involves a loss of 135,000 to the Native States.

Asiatic Immigration.—Of the 504,000 persons born in other Asiatic countries who were resident in India at the time of the census, more than half were natives of Nepal. Of the 92,000 immigrants from Afghanistan all but 11,000 were enumerated in Northern India. The rest were cold weather visitors who travel about the country peddling piece-goods and other articles of clothing. These Cabuli pedlars cause great trouble in Bengal by their truculence. The number of Chinese is 80,000. Most of these are found in Burma, but the Chinaman is making his way into Bengal, where he is appreciated as a shoemaker and carpenter. From Arabia come 23,000 immigrants, chiefly to Bombay.

Non-Asiatic Immigration.—The total number of immigrants from countries outside Asia is 146,265. Of these 131,968 come from Europe. The United Kingdom sends 122,919; Germany comes next with only 1,860 and then France with 1,478. As compared with 1901 there is an increase of about 26,000 in the number of immigrants from the United Kingdom. Of the British-born 77,626 were serving in the army as compared with 60,965 at the time of the previous census, when a strong contingent had been sent from India to reinforce the British garrison in South Africa. The rest of the increase is accounted for by the industrial development which has taken place, the extension of railways, and the growing extent to which Englishmen in India marry. The number of females born in the British Islands and enumerated in India has risen during the decade from 14,663 to 19,494. The figures for other European countries do not call for any special comment.

Emigration from India.—The Indian census statistics naturally tell us nothing of the emigration from India to other countries. This emigration is of two kinds, the movement across the border which separates India from contiguous countries, such as China, Nepal, Afghanistan and Persia, much of which is of the casual type, and emigration to distant countries. No statistics are available regarding the emigration from India to the countries on its borders. There is probably very little movement from Burma into China

STATISTICS OF RELIGIONS.

Religion								India.	British Provinces.	Native States.
INDIA								315,156,396	244,267,542	70,888,854
Hindu	..	..	..	..	..	..	..	217,586,892	163,621,431	53,965,461
Brahmanic Arya	..	..	..	..	..	..	..	217,337,943	163,381,380	53,956,563
	..	..	..	..	..	..	..	243,445	234,841	8,604
Brahmo	..	..	..	..	..	..	..	5,504	5,210	204
Sikh	..	..	..	..	..	..	..	3,014,466	2,171,908	842,558
Jain	..	..	..	..	..	..	..	1,248,182	458,578	789,604
Buddhist	..	..	..	..	..	..	..	10,721,453	10,644,409	77,044
Zoroastrian (Parsi)	..	..	..	..	..	..	..	100,096	86,155	13,941
Musalman	..	..	..	..	..	..	..	66,647,299	57,423,889	9,223,416
Christian	..	..	..	..	..	..	..	3,876,203	2,492,284	1,383,919
Jew	..	..	..	..	..	..	..	20,980	18,524	2,456
Animistic	..	..	..	..	..	..	..	10,295,168	7,348,024	2,947,144
Minor Religions and Religion not returned	..	..	..	..	..	..	..	37,101	2,340	34,761
Not enumerated by Religion	..	..	..	..	..	..	..	1,608,556	....	1,608,556

POPULATION ACCORDING TO RELIGION AND EDUCATION (CENSUS OF 1911).

Religions.					Males.			
					Total Population.	Illiterate.	Literate.	Literate in English.
Hindu	..	..	..	..	110,865,731	99,642,597	11,223,134	1,013,596
Sikh	..	..	..	..	1,734,773	1,550,610	184,163	11,490
Jain	..	..	..	..	643,553	324,968	318,585	13,030
Buddhist	..	..	..	..	5,286,142	3,151,761	2,134,381	21,767
Parsi	..	..	..	..	51,123	11,128	39,995	25,334
Muhammadian	..	..	..	..	34,709,365	32,319,599	2,389,766	176,051
Christian	..	..	..	..	2,010,724	1,422,154	688,570	252,591
Animistic	..	..	..	..	5,088,241	5,034,408	53,833	1,521
Minor and Unspecified	..	..	..	..	28,818	22,430	6,388	2,931
Total Males	..	..	..	..	160,418,470	143,479,655	16,938,815	1,518,361
					Females.			
Hindu	..	..	..	..	106,720,714	105,905,904	814,810	23,659
Sikh	..	..	..	..	1,279,667	1,262,387	17,280	238
Jain	..	..	..	..	604,629	580,509	24,120	209
Buddhist	..	..	..	..	5,435,086	5,117,748	317,338	1,383
Parsi	..	..	..	..	48,973	17,755	31,218	8,347
Muhammadian	..	..	..	..	31,883,812	31,746,005	137,807	3,940
Christian	..	..	..	..	1,865,472	1,613,177	252,295	112,643
Animistic	..	..	..	..	5,129,303	5,126,316	2,987	74
Minor and Unspecified	..	..	..	..	29,263	26,355	2,908	1,533
Total Females	..	..	..	..	152,996,919	151,396,156	1,600,763	152,026
Total Population	..	..	..	..	313,415,389	294,875,811	18,539,578	1,670,387

but, on the other hand, it is believed that the emigration into the somewhat sparsely peopled Nepal terai from some of the adjacent British districts, where the population is much congested, exceeds the countervailing immigration. Very few people go from British territory to settle permanently in Afghanistan or Persia, but at the time when the last census was taken owing to drought in Baluchistan, a considerable number of Nomad Brahmins from Chagai, and of Baloch from Mekran had passed over temporarily into Afghanistan and Persia. At a rough guess the number of emigrants across the Indian Frontier may be taken to be about a fifth of a million.

Emigration to Distant Countries.—Of the emigrants to distant countries a certain number find their way to French or Dutch Colonies, such as Surinam, Martinique and Guadeloupe. But the majority go to other parts of the British Empire. The total number of emigrants from India to other parts of the British Empire slightly exceeds a million, of whom about two-thirds are males; more than four-fifths of the aggregate are Hindus and only one-tenth are Mahomedans. Of the total number, about 474,000 were enumerated in Ceylon, 231,000 in the Straits Settlements and the Malay States, 88,000 in British Guiana, 73,000 in Natal, 51,000 in Trinidad, 35,000 in Mauritius, 29,000 in Fiji and 8,000 each in Jamaica and Zanzibar. About one-fifth of these emigrants failed to specify their province of birth; of the remainder no less than 693,000 or 85 per cent. were from Madras, 32,000 from Bengal, about 20,000 each from the United Provinces and Bombay, 16,000 from Bihar and Orissa, 13,000 from the Punjab and 8,000 from the Mysore State. The number who emigrated from other parts of India was inconsiderable. Most of these emigrants to the colonies went as ordinary labourers in sugar, tea, coffee, rubber and other plantations, but a large number of those from Bombay and Bengal are lascars on ships, while many of the natives of the Punjab are employed in the army or military police.

Ceylon.—The movement to Ceylon is of long-standing. Owing to the rapid expansion of tea cultivation, the number of natives of

India enumerated in that Island increased by 65 per cent. in the decade ending in 1901. Since then there has been a further increase of nearly 10 per cent. chiefly on account of the new rubber plantations. The great majority of these emigrants are from the southern districts of Madras. Mysore sends about 8,000, Travancore 7,000 and Cochin and Bombay 3,000 each. Most of them are temporary emigrants, who return after a time to their homes in Southern India. The total number of Tamils enumerated in Ceylon exceeds a million, but about half of them have been domiciled in the Island for many centuries and barely 100,000 are the offspring of recent settlers.

Malaya.—The emigration to the Straits Settlements and the Malay States is of quite recent growth, and is due almost entirely to the demand for labour on the rubber plantations. Most of the emigrants are temporary settlers, who return to their homes when they have saved a little money; and the total number of Indians enumerated there exceeds by only 12 per cent. the number who returned to India as their birth-place. Almost four-fifths of the total number are males. Here also Madras is the principal source of supply, the Punjab (8,754) being the only other province which sends an appreciable number.

South Africa.—In Natal, there has been a great deal of permanent settlement; and of the total number of Indians enumerated there, nearly half were born in the colony. Many of these have forgotten their native language and now talk only English. But it is in Mauritius that the process of colonisation has made most headway. The introduction of Indian coolies to work the sugar plantations dates from the emancipation of the slaves, three quarters of a century ago; and from that time onwards many of the coolies who have gone there have made the island their permanent home. Though it now contains only 35,000 persons who were born in India, the total number of Indians is 258,000, or about 70 per cent. of the whole population. A large part of the island is now owned by Indians, and they are dominant in commercial, agricultural and domestic callings.

RELIGIONS.

India is a land of many religions. All the great religious faiths of mankind are represented in its population by communities, whose origin carries us back to the early history of their respective creeds. Hinduism and its offshoots, Buddhism and Jainism, are autochthonous. The Jews of Cochin have traditions which carry back their arrival on the coast to the time of their escape from servitude under Cyrus in the sixth century B. C. The Syrian Christians of Malabar ascribe the introduction of Christianity and the establishment of their original Church to the Apostle St. Thomas, in the year 52 A.D. Nearly two centuries before the followers of Mahomed obtained a footing in India as conquerors, a peaceful trading colony of Arabs had settled on the Malabar coast. The Parsi settlement in Gujarat dates from about the same period. These facts are recalled here because not only Europeans, but even educated Indians, speak as if the first foreign settlement in India

was that which followed the Mahomedan conquest, and that Christianity was first brought to the country by the Portuguese. They also dispose of another erroneous idea that up to the time of the Mahomedan conquest, Hinduism absorbed all the foreign elements which found their way into the country. No doubt Greeks, Bactrians and Scythians were so absorbed into the structure of Hinduism, but the fact that the Jews, the Syrian Christians and the Parsis have remained distinct from Hinduism, shows that this was not the case universally. If we may hazard a conjecture, it would seem that the ancient Hindu policy towards immigrants who came by land differed from that observed in the case of immigrants by sea. The Indo-Aryan himself entered the country through the mountain passes in the North-West, and knew something of the land which lay beyond. But the sea was always something of a mystery and a terror to him, and those

OCCUPATIONS OF THE INDIAN PEOPLES.

INDIA	313,470,014
A.—PRODUCTION OF RAW MATERIALS	227,030,092
<i>I.—Exploitation of the Surface of the Earth</i>	226,550,483
Pasture and agriculture	224,695,900
(a) Ordinary cultivation	216,787,137
(b) Growing of special products and market gardening	2,012,503
(c) Forestry	672,093
(d) Raising of farm stock	5,176,104
(e) Raising of small animals	48,063
Fishing and hunting	1,854,583
<i>II.—Extraction of Minerals</i>	529,609
Mines	375,927
Quarries of hard rocks	75,424
Salt, etc.	78,258
B.—PREPARATION AND SUPPLY OF MATERIAL SUBSTANCES	58,191,121
<i>III.—Industry</i>	35,323,041
Textiles	8,306,501
Hides, skins and hard materials from the animal kingdom	698,741
Wood	3,799,892
Metals	1,861,445
Ceramics	2,240,210
Chemical products properly so called, and analogous	1,241,587
Food industries	3,711,675
Industries of dress and the toilet	7,750,609
Furniture industries	39,268
Building industries	2,062,493
Construction of means of transport	66,056
Production and transmission of physical forces (heat, light, electricity, motive power, etc.).	14,384
Industries of luxury and those pertaining to literature and to arts and sciences.	2,141,665
Industries concerned with refuse matter	1,388,515
<i>IV.—Transport</i>	5,028,900
Transport by water	982,766
Transport by road	2,781,938
Transport by rail	1,062,493
Post Office, telegraph and telephone services	201,781
<i>V.—Trade</i>	17,839,102
Banks, establishments of credit, exchange and insurance	1,220,187
Brokerage, commission and export	240,858
Trade in textiles	1,277,469
Trade in skins, leather and furs	296,712
Trade in wood	224,838
Trade in metals	59,766
Trade in pottery	101,981
Trade in chemical products	171,927
Hotels, cafes, restaurants, etc.	719,052
Other trade in food stuffs	9,478,868
Trade in clothing and toilet articles	306,701
Trade in furniture	178,413

who came from beyond the sea were looked upon as beings of a different clay. They were treated hospitably, and in course of time they assimilated much of the influences of their Hindu environment. But they remained all the same separate communities, and no attempt was made to incorporate them in the great mass of Hinduism. The prohibition of sea voyage to members of the higher castes is another proof of the peculiar prejudice which ancient Indians cherished against inhabitants of countries divided from India by intervening seas.

Origin of Hinduism.—We have spoken alone of Hinduism as being autochthonous. The opinion generally held is that the ancestors of the Vedic Indians were immigrants from Central Asia. An Indian scholar of some repute has recently endeavoured to show that the received opinion is not borne out by the evidence available in the ancient literatures of India. Whatever may be the value attaching to his contention that the Vedic Indians were not immigrants or descendants of immigrants, but only a section of the indigenous population addicted to the cult of fire-worship, it is true, as he says, that there is no expression in the Vedas of a longing, lingering remembrance of a foreign homeland, such as one might expect to find in the literature of an immigrant race. This is all the more remarkable as an intense attachment to the land they lived in is manifest in all their compositions. A Sanskrit couplet in which the names of the seven great rivers of India, the Ganges, the Jumna, the Godavari, the Saraswati, the Nerbudda, the Indus and the Cauvery, are strung together in pious praise, is recited daily by millions of Hindus at their daily devotions, and helps to keep them in mind of the sanctity of the Indian Continent in Hindu eyes. If the ancient Hindus were immigrants, they not only took exceptional care to blot out all memories of the land from which they came from their own minds, but they also strove by every means in their power to bind the reverence and love of their posterity to India as the land *par excellence* of religion and morality, so much so that the name Hindu, in the orthodox acceptance of the term, is not applicable to anyone who is not born in India. If the ancestors of the Hindus were foreigners in India, they must have set themselves, as a matter of deliberate policy, to intertwine the deepest affections and the highest aspirations of their race with the land in which they had settled, to the entire exclusion of the land whence they had come.

Evolution of Hinduism.—Following from the theory that the ancestors of the Hindus were immigrants from Central Asia, is the explanation generally given of the varieties of religious beliefs and social practices to be found within the pale of Hinduism. Hinduism, it is the common idea, was originally a pure and simple creed which has had to compromise with the Animism of the population, amongst whom it spread, by accepting several of its godlings and superstitions. The greatest obstacle in the way of this explanation is that there is no evidence whatsoever of any organised missionary activity among the Hindus at any time. The immense distances and the absence of means of communication, would

of themselves have made such activity difficult. Moreover, a compromise implies selection and rejection and the existence of some agency entrusted with the duty of selection. As a fact, however, we find that Hinduism has exercised very little selection, and that it covers practically all the beliefs and customs which prevail amongst the tribes who are included within its pale. Such a state of things is more consonant with the view that the purer forms of Hinduism are highly evolved stages of the cruder forms which are still observed by the less educated and prosperous sections of the community. This view, namely, that the higher forms of Hinduism are evolved from lower ones, rather than that the latter are corruptions of the former, gains support from what is now generally accepted as being the true explanation of the origin of certain social customs. Twenty years ago, it was generally held that the custom of child marriages, for instance, was of sacerdotal origin and was most largely prevalent amongst the higher castes from whom it spread to the lower. Recently, however, it has been proved that child marriages are prevalent far more largely and in a far grosser form amongst the lowest castes than amongst the higher castes, and that amongst the latter, it is a survival from the times when the caste system was less rigid and intermarriages, that is to say, the taking of wives by the higher castes from the lower, were common. It may be added that the two most characteristic beliefs of Hinduism, namely, that in the transmigration of souls and in the law of *Karma* or retribution, are held with, if anything, more tenacity by the lower than by the higher castes.

Scope of Hinduism.—From this point of view, the varying beliefs and customs which go under the name of Hinduism not only offer no difficulties, but furnish the right clue to the understanding of this unique socio-religious system. They explain why the term "religion" as applied to Hinduism does not adequately express its scope and method. Hinduism has no settled creeds which are obligatory on every Hindu. It enforces no fixed and uniform moral standards on the innumerable sects and castes which bear its name. It extends its suffrages to monogamous, polygamous and even polyandrous unions between the sexes and, in the case of the so-called *devadasis*, countenances a life of open irregularity. An Indian newspaper recently instituted an interesting discussion on the question "Who is a Hindu." An eminent Hindu lawyer, who subsequently rose to be a judge of one of the Indian High Courts, laid down that a Hindu was one to whom the Indian Courts would apply the Hindu law. The learned lawyer, however, forgot that there are Mahomedan castes which follow the Hindu law in regard to the inheritance of and succession to property.

And yet, though Hinduism refuses to conform to almost every one of the ideas which we usually associate with the term "religion," it is impossible to deny that it occupies a unique and highly important place amongst the religious systems of the world. The reason why it does not fit into our definition of religion is that it represents a fundamentally different line of evolution in the history of religious

OCCUPATIONS OF THE INDIAN PEOPLES—*contd.*

<i>V.—Trade—contd.</i>										
Trade in building materials	..	..	..	..	..	..	..	..	..	84,613
Trade in means of transport	..	..	..	..	..	..	..	..	..	239,396
Trade in fuel	..	..	..	..	..	..	..	..	..	524,962
Trade in articles of luxury and those pertaining to letters and the arts and sciences.										522,130
Trade in refuse matter	..	..	..	..	..	..	..	..	..	3,695
Trade of other sorts	..	..	..	..	..	..	..	..	..	2,192,534
C.—PUBLIC ADMINISTRATIONS AND LIBERAL ARTS										10,912,123
<i>VI.—Public Force</i>										2,398,586
Army	..	..	..	..	..	..	..	..	..	665,278
Navy	..	..	..	..	..	..	..	..	..	4,640
Police	..	..	..	..	..	..	..	..	..	1,728,668
<i>VII.—Public Administration</i>										2,648,005
<i>VIII.—Professions and Liberal Arts</i>										5,325,357
Religion	..	..	..	..	..	..	..	..	..	2,769,489
Law	..	..	..	..	..	..	..	..	..	302,408
Medicine	..	..	..	..	..	..	..	..	..	626,900
Instruction	..	..	..	..	..	..	..	..	..	674,393
Letters and arts and sciences	..	..	..	..	..	..	..	..	..	951,167
<i>IX.—Persons living principally on their Income</i>										540,175
D.—MISCELLANEOUS										17,286,678
<i>X.—Domestic Service</i>										4,599,080
<i>XI.—Insufficiently described Occupations</i>										9,236,210
<i>XII.—Unproductive</i>										3,451,381
Inmates of jails, asylums and hospitals	..	..	..	..	..	..	..	..	..	132,610
Beggars, vagrants and prostitutes	..	..	..	..	..	..	..	..	..	3,318,771

DISTRIBUTION OF THE POPULATION.

		India.	British Provinces.	Native States.
1	2	3	4	
Area in square miles	1,802,657	1,093,074	709,583
Number of Towns and Villages	722,495	538,809	183,686
(a) Towns	2,153	1,452	701
(b) Villages	720,342	537,357	182,985
Number of Occupied Houses	63,710,179	49,140,947	14,569,232
(a) In Towns	6,037,456	4,409,121	1,628,335
(b) In Villages	57,672,723	44,731,826	12,940,897
Total Population	315,156,396	244,267,542	70,888,854
(a) In Towns	29,748,228	22,817,715	6,930,513
(b) In Villages	285,408,168	221,449,827	63,958,341
Males	161,338,935	124,873,691	36,465,244
(a) In Towns	16,108,304	12,525,830	3,582,474
(b) In Villages	145,230,631	112,347,861	32,882,770
Females	153,817,461	119,393,851	34,423,610
(a) In Towns	13,639,924	10,291,885	3,348,039
(b) In Villages	140,177,537	109,101,966	31,075,571

thought. In other races the line of evolution was from polytheism to monotheism, but in India it was from polytheism to the higher pantheism. Contrasting the development of the Judaic idea of God with that of the Hindus, Dr. Harold Haffding observes "With the Hindus there was no God who claimed sole sway; they went back to the power which makes all gods what they are, to the inner aspirations and needs which find vent for themselves in prayer and sacrifice. Following an extremely remarkable line of thought that which drives men to worship gods was itself regarded as the true divine power. Brahma meant originally the magical, creative word of prayer, but it afterwards came to denote the principle of existence itself, so that we have a transition from the idea of motion towards to that of its goal, from prayer to the object addressed in prayer." The Indian philosopher saw the whole universe transfused and overspread with Deity. He perceived how evil was being perpetually transformed to good in the cosmic process spreading out before the poet and the philosopher, endless and timeless, to whom the evil and the good seemed but different stages in a great common process of which the secret was known only to the Supreme Being. No European writer has caught the innermost essence of the Hindu philosopher's idea of the Supreme, so faithfully, and expressed it so felicitously as Sir Edwin Arnold in his "Light of Asia."

Before beginning, and without an end,
As space eternal and as surety sure,
Is fixed a Power divine which moves to
good,

Only its laws endure.
It is not marred nor stayed in any use,
All liketh it; the sweet white milk it brings
To mothers' breasts, it brings the white
drops too,

Wherewith the young snake stings.
It slayeth and it saveth, nowise moved
Except unto the working out of doom;
Its threads are Love and Life; Death and
Pain

The shuttles of its loom.
It maketh and unmaketh, mending all;
What it hath wrought is better than had
been;

Slow grows the splendid pattern that it
plans

Its wistful hands between.

The ethical values of Hinduism are not different from those of other great religions. Like them it attaches little importance to the qualities which make for worldly success, and most importance to self-sacrifice, humility and kindness to all. Only its methods differ. On the whole, however, the Hindu socio-religious scheme, owing to its tendency to make the individual human being a passive instrument in the hands of a Higher Power instead of an active co-operator with it, has favoured stability at the expense of progress.

Hindu sects.—Hinduism is made up of many sects and cults. It is usual to speak of Hinduism as it was before Buddhism, as a single creed, but this is because the literature that has come down to us is the literature of the sect that came to supersede all others.

But even in it, we can, by reading between the lines, discover the existence of rival sects. Even the Vedas themselves are the literature probably of one of several sects which happened to be gifted with a talent for letters. The rapid multiplication of sects, however, was undoubtedly encouraged by the introduction of idol worship in imitation of the practice of decadent Buddhism. Hindu religious philosophers recognised three ways of salvation, namely, the way of knowledge, the way of faith and the way of service. Every sect of Hinduism recognises the value of all these three ways, but it differs as to the relative importance to be attached to each. The sect of the great philosopher, Sankaracharya, who maintained that the Supreme Being was the only Reality and that all the phenomenal universe was Maya or illusion, and that salvation came from the realisation of this fact, did not discard faith and service altogether, but only gave these a subordinate position in his scheme of religion. Ramanuja, Madhva and Vallabacharya who followed him and, in more or less degree, refuted his doctrine of the non-reality of the phenomenal universe, laid more stress on faith and service than on knowledge, but they did not discard the path of knowledge altogether. It should be mentioned here that it has been the great misfortune of Hinduism that the path of service has come to mean the path not of altruistic service to mankind but the path of service conceived in a ceremonial sense to priests, religious recluses and mendicants and to idols. It is the great aim of the modern religious reform movements such as the Arya Samaj and the Brahma Samaj to rescue the path of service from this spurious interpretation and to make altruistic social service an integral part of religion. The question of sect, however, does not play a very important part in Hinduism. Except in Southern and to a much smaller extent, in Western India, the great mass of the Hindus are not sectaries. In Southern India, the Vaishnavas and Madhvas will, on no account, worship Shiva or visit a temple dedicated to him. The Lingayaths are a Shiva sect found in the Karnatak districts of the Bombay and Madras Presidencies, and in Mysore, and they have an invincible repugnance to the worship of Vishnu. But these are exceptional instances. But so far as the bulk of the Hindus are concerned, they resort to the nearest shrine whether it be dedicated to Shiva or Vishnu. The attitude of Hinduism to other religions is that they are each of them the most suitable path to salvation for the people who are born in them—that they are all several roads which lead to Heaven. For this reason Hinduism has never been a proselytising religion. This has proved a disadvantage to it face to face with such religions as Mahomedanism and Christianity which not only admit converts, but are actively engaged in seeking them. The proportion of Hindus to the total population has steadily diminished during the last forty years, partly owing to conversions to other religions particularly from amongst the lower classes. Conversions from among members of the higher and literate classes have practically ceased.

Hinduism.—The Hindus number 217,586,892 or 69·4 per cent. of the total population of

India. Buddhists and Jains together number 11,969,635. Thus 229,556,527 or about 73 per cent. of the Indian people depend for their spiritual sustenance on Hinduism and its offshoots.

The Buddhist population is mostly Burmese, Buddhism having ceased a thousand years ago to count as a leading religion in the land of its birth. Several reasons are usually given to account for the hostility of Hinduism to Buddhism, such as that Buddha denied the authority of the Vedas and the existence of God and of the human soul. Jainism did all this, and yet Jains to-day occupy a recognised position in the Hindu social system. The real reason for the Hindu hostility to Buddhism was that it influenced and was in its turn influenced by in the later years of its prevalence in India, the alien Mongolian consciousness. Hinduism has always been extremely tolerant of indigenous heresies, but it is jealous of outside influence. Indian Buddhism, too, had become extremely corrupt and superstitious long before Hinduism re-established itself as the religion pre-eminently of the Indian people.

Other Indigenous Religions.—Buddhism and Jainism were originally only sects of Hinduism. Jainism even now is not so sharply divided from the latter religion as Buddhism is. Jains are everywhere a recognised section of Hindu Society, and in some parts of the country there has been an increasing tendency on their part to return themselves at the Census as Hindus. The outstanding feature of Jainism is the extreme sanctity in which all forms of life are held. The Jains are generally bankers and traders. Their number at the last Census was 1,248,182, the apparent decline being due to the tendency noted above for Jains to return themselves as Hindus. Buddhism is professed but by few persons in India. The Buddhist population of the Indian Empire is mainly Burmese. Their number is 10,721,453. The founders of Buddhism and Jainism are believed to have been contemporaries, whose date is assigned somewhere in the 5th Century B.C. Sikhism, which is the next important indigenous religion, had its origin many centuries later. The founder of Sikhism,

Guru Nanak, flourished in the latter half of the 15th Century of the Christian era. Nanak's teaching amounted to nothing more than pure Theism. He taught that there is only one true God, he condemned idolatry, proclaimed the futility of pilgrimages and rites and ceremonies, and declared that the path to salvation lies through good deeds combined with devotion to the Supreme Being. He preached the brotherhood of men. Sikhism continued to exist as a pacific cult till about the end of the seventeenth century, when the persecutions of Aurangzeb had the effect of converting it into a militant creed. This momentous change was accomplished under the direction of Guru Govind, the tenth and last of the Gurus: "I shall send a sparrow," he once exclaimed and "lo! the imperial falcons will fly before it." On his death-bed, he exhorted his followers to regard the Granth, the sacred book of the Sikhs, as their Guru, to look upon it as the person of the living Guru. After his death, Sikhism passed through a period of deepest gloom, but it soon recovered and in 1758 the Sikhs entered Lahore in triumph. The teachings of Guru Nanak have profoundly affected Hindu thought and life in the Punjab, though the number of persons professing the Sikh religion is only 3,014,466 according to the 1911 Census. This represents an increase of over 40 per cent. since 1901. Two other religious movements, offshoots of Hinduism, remain to be mentioned, namely, the Brahmo-Samaj and the Arya-Samaj. Both of them are less than one hundred years old. The founder of the former was Raja Ram Mohan Roy, and of the latter, Swami Dayanand Saraswati. The Brahmo-Samaj does not believe in an infallible scripture, while the Arya-Samaj accepts the Vedas as Divinely revealed. Both the movements are opposed to idolatry and favour social reform. The Brahmo movement, appealing as it does to the cultured intellect, has not been making as much progress as the Arya-Samaj. The number of persons professing each of these creeds is 5,504 and 243,445 respectively. The stronghold of the Arya-Samaj is the Punjab, that of the Brahmo-Samaj, Bengal.

Non-Indian Religions.

Mahomedanism.—Of non-Indian religions, that is, of religions which had their origin outside India the religion which has the largest number of followers in this country is Mahomedanism. One hundred years before the Musulmans obtained a foothold in Sind by right of conquest, they were settled in Cochin as traders and missionaries. The author of Cochin Tribes and Castes refers to a tradition that in the 7th Century, a Mahomedan merchant named Malak Medina, accompanied by some priests, had settled in or near Mangalore. The Kollam era of Malabar dates, according to popular tradition, from the departure of Cheruman Perumal, the last of the Perumal Kings, to Arabia, on his conversion to Islam. The date of the commencement of the era is the 25th August 825 A.D. For about twelve Centuries, Islam has existed in India side by side with Hinduism. During that period it has been greatly influenced by Hindu ideas and institutions. Moreover, the Indian converts to Mahomedanism have to a large extent retained

the customs and beliefs of Hinduism. The writer of the article on religions of India in the new edition of the *Imperial Gazetteer* observes of Islam in India: "If it has gained some converts from Hinduism it has borrowed from it many of those practices which distinguish it from the original faith of Arabia. By degrees the fervid enthusiasm of the early raiders was softened down; the two religions learned to live side by side; and if the Mahomedan of the later days could never conceal his contempt for the faith of his 'pagan' neighbours, he came to understand that it could not be destroyed by persecution. From the Hindus Islam derived much of its demonology, the belief in witchcraft, and the veneration of departed Pirs or Saints. The village Musulman of the present day employs the Hindu astrologer to fix a lucky day for a marriage, or will pray to the village god to grant a son to his wife. This is the more natural, because conversion to Islam, whenever it does occur, is largely from the lower castes." Mahomedanism has

two main and several minor sects. The major sects are the Shiah and the Sunni. The great majority of Indian Mussulmans are of the latter sect. The Punjab and Sind in the North-West and East Bengal in the North-East are the strongholds of Islam in India. The Mussulman population of India, according to the Census of 1911, is 66,647,299. Of this number no less than 24 millions are in Bengal, about 12 millions in the Punjab, and about 5 millions in the United Provinces. Amongst Native States, Kashmere has the largest Mussulman population, about 2½ millions.

Christianity.—Indian Christianity has an even longer history than Indian Mahomedanism. According to the tradition prevailing among the Syrian Christians in Malabar, the introduction of Christianity and the establishment of the Original Church in Malabar in the year 52 A.D. are ascribed to the Apostle St. Thomas, who landed at Cranganore or Musiris, converted many Brahmins and others, ordained two Presbyters, and also founded seven churches, six in Travancore and Cochin, and the seventh in South Malabar (Cochin Castes and Tribes, Vol. II. Chapter XVI, p. 435). The history of Roman Catholicism in India dates from the beginning of the sixteenth Century. The first Protestant mission was established two centuries later by the Lutherans who started their work in Tranquebar in South India under Danish protection. The Christian population, according to the last Census, numbers 3,876,203. Nearly 2½ millions are inhabitants of the Madras Presidency and the Native States connected with it. Bihar and Bombay have each over 200,000 Christians.

Zoroastrianism.—This religion was brought or brought back to India in 717 A.D. by Parsis who, fleeing from persecution at the hands of the Mussulman conquerors of their native land, arrived at the little port of Sanjan, sixty miles north of Bombay in that year. According to the Indian antiquarian scholar, the late Rajendralal Mitra, the ancestors of the Hindus and Parsis dwelt together in the Punjab, when a religious schism led to the latter retracing their steps to Persia. This theory derives probability from the names of the beneficent and malefic deities referred to in the Hindu and Parsi sacred books: "What is most striking in the

relations of the two faiths, is," writes Mr. Crooke in his article on the Religions of India in the *Imperial Gazetteer*: "that in the Avesta the evil spirits are known as *Daeva* (modern Persian *Div*), a term which the Indo-Aryans applied, in the form *Deva*, to the spirits of light. By a similar inversion, *Asura*, the name of the gods in the Rig Veda, suffered degradation and at a latter date was applied to evil spirits; but in Iran, *Ahura* was consistently applied in the higher sense to the deity, especially as *Ahura Mazda*, the wise, to the Supreme God." The Parsis have two sects. The principal difference between them appears to be that the holy days of the one precede those of the other by about a month. The number of Parsis, according to the last Census, is 100,096. The majority of the Parsis live in Bombay.

Jews.—The Beni-Israel at Kolaba, in Bombay and the Jews at Cochin are descendants of ancient Colonies. The Kolaba Colony dates back to the sixth century, and the Cochin colony to the second century A.D. Both Jewish colonies recognize a white and black section, the latter being those who have more completely coalesced with the native population. The Jews numbered 20,980 at the Census of 1911.

Animists.—Since the Census of 1891, an attempt has been made to enumerate the "Animists" separately from the Hindus. 10,295,168 persons are classed as Animists, according to the last Census. The difference between Animism and Anthropomorphism has been stated by Professor Westermarck, to be that, while the animist worships inanimate objects as gods, Anthropomorphism consists in the worship of such objects as representatives and reflection of the Deity. As a subtle distinction of this kind is not within the grasp of the average enumerator, the category of Animists in the Census Schedules is largely conjectural. Mr. Crooke in the *Imperial Gazetteer* observes "Such a classification is of no practical value, simply because it ignores the fact that the fundamental religion of the majority of the people—Hindu, Buddhist, or even Mussulman is mainly Animistic. The peasant may nominally worship the greater gods; but where trouble comes in the shape of disease, drought, or famine, it is from the older gods that he seeks relief."

SOCIAL INSTITUTIONS.

Uniformity of Indian Social Life.—Though India is a land of many religions and though each religious community has, as a rule, lived apart from the other communities for centuries, still there is a considerable uniformity in the arrangements and institutions of their social life. The social system of the Hindus is the type to which all other communities domiciled in the country have hitherto tended to conform. To a large extent, this uniformity of social arrangements is clearly due to the fact that, amongst the Mahomedans and Indian Christians, for instance, the converts from Hinduism continued to retain their old ideas in regard to social conduct. To a smaller extent, the motive which influenced them to conform to Hindu social ideal has been the convenience thereby caused in business intercourse with their Hindu neighbours.

Thus, we find, there is scarcely any community in India which has not been more or less infected by the caste spirit. The Jews, the Parsis, the Christians, and even the Mahomedans have been influenced by it. Other Hindu social institutions and customs which have exerted a similar influence are the joint family system, the custom of child marriages, and of enforced widowhood, and the feeling that contact with persons engaged in certain occupations is polluting. In view of this general similarity of the social institutions of the several Indian communities, a description of the Hindu social system which is the great prototype of them all, will give a general idea of the social life of the Indian population as a whole. It should, however, be mentioned here that, in recent years, as the result of a growing communal consciousness, efforts have been

made by many of the Indian communities to discard whatever is in disaccord with the original simplicity of their respective faiths. But this movement has as yet touched no more than the highly educated fringe, and even among the latter, there are thoughtful men who distrust "revivals" as substitutes for reform.

Caste.—The most conspicuous social institution of India is Caste. Caste is based on birth. The effect of caste is to divide society into a number of vertical sections, and not as in modern countries, into horizontal sections. The economic and cultural differences among the members of each caste are great. The millionaire and the pauper, the scholar and the illiterate of one caste, form a social unit. The rich man of one caste must seek a husband for his daughter among the poor of his caste, if he cannot find one of a corresponding position in life. He can on no account think of marrying her to a young man of another caste, though as regards culture and social position, he may be a most desirable match. Thus, each caste is, within itself, a democracy in which the poor and the lowly have always the upper hand over the rich and the high-placed. In this way, the system of caste has, in the past, served as a substitute for State relief of the poor by means of special laws and institutions. To some extent, this is the case even now, but the economic pressure of these days, and the influence of Western education, are profoundly modifying the conception of caste. The growth of the English-educated class on the one hand, and of the modern industrial and commercial class of Indians, on the other with common aspirations and interests, is a factor calculated to undermine the importance of caste. Although for purely social purposes, it will, no doubt, linger for many years longer, it is bound ultimately to collapse before the intellectual and economic influences which are moulding modern India. The question how caste originated has been discussed by several learned Orientalists, but the latest and most authoritative opinion is that its rise and growth were due to several causes, the principal of them being differences of race and occupation. The four original castes of the Hindus have multiplied to nearly two thousand, owing to the fissiparous tendencies of Hindu social life. Some large castes consist of many thousands of families, while others, notably in Gujarat, comprise scarcely a hundred houses. Among Indian Mahomedans, there are several communities which are virtually castes, though they are not so rigidly closed as Hindu castes. Indian Christian converts, in some parts of the country, insist on maintaining the distinctions of their original castes, and in a recent case, one caste of Indian Christians contested, in a Court of Law, a ruling of their Bishop disallowing the exclusive use of a part of their church to members of that caste. The Parsis are practically a caste in themselves. The observations regarding caste apply more or less to the institution of the joint family of which really the former is an extension. This institution is rapidly breaking-up, though the rigidity of the Hindu law of succession operates wholly in its favour.

The Social Reform Movement.—The social reform movement among the Hindus

to which reference is made in the foregoing paragraph, had its origin in efforts made by the Government of India, with the co-operation and support of enlightened Hindus in the early part of the last century to put down the practice of *sati*, that is, burning the widow along with her dead husband. This cruel practice, which prevailed particularly among the high caste Hindus in Bengal, was eventually suppressed by legislation. But the discussions which ensued in connection with *sati* question led to the exposure of the hard lot of Hindu widows as a class. Remarriage was prohibited and as child marriages were common, several young girls were condemned to lead a life of celibacy on the death of their husbands. This led to immorality and infanticide by young widows, who were anxious to hide their shame was not inrequent. Led by the Pandit Ishwar Chandra Vidyasagara, a very learned Sanskrit scholar, a movement began which had for its object the removal of the ban on the remarriage of Hindu widows. The Pandit was able to prove from the Hindu religious books that the remarriage of widows had the sanction of antiquity. But it was necessary, in order to establish the validity of the remarriage of Hindu widows beyond doubt, to have a law passed by the Legislative Council of the Governor-General of India. The Pandit and his followers memorialised Government. There was strong opposition from the orthodox masses, but the Government of the day were convinced that justice was on the side of the reformers, and the Hindu Widow Remarriage Act was passed. The controversy on the question of the remarriage of widows led to other consequences. It was felt that the age at which girls were married was absurdly low, and that child marriages were at the root of many social evils. It was also realised that the general illiteracy of Indian women was the greatest obstacle in the way of reforming social customs, and that education of women should be the first plank in the social reform platform. The earliest social reformers in India were the Brahmo Samajists who discarded idolatry and caste. Other reformers since then have endeavoured to propagate ideas of social reform entirely on a secular basis. The Indian National Social Conference is their principal organisation, and it is supported by Provincial and District Conferences and Associations. Social reform ideas have made considerable headway during the last twenty-five years. Widow marriages are of weekly occurrence in some provinces. The restrictions of caste as to inter-dining and sea-voyage have lost much of their force. The age at which girls are married is steadily, if slowly, rising. The education of girls is making rapid progress. An increasing number of them go to high Schools and Colleges every year. But the most significant testimony to the spread of social reform ideas in the country is the remarkable diminution in the volume and weight of the opposition to them. The number of journals devoted to the social reform cause is increasing, and some of the newspapers which had made themselves conspicuous by their virulent opposition to social reform twenty years ago, now recognise its utility and importance.

SEX.

In India as a whole the proportion of females per thousand males rose steadily from 954 in 1881 to 963 in 1901. It has now fallen again to exactly the same figure as in 1881. The important aspect of these figures is the great contrast they show between India and Europe, where the number of females per thousand males varies from 1,093 in Portugal, and 1,068 in England and Wales, to 1,013 in Belgium, and 1,003 in Ireland. In drawing attention to this disparity the Chief Census Officer argued that the relatively high mortality amongst females was sufficient to account for the difference stated. Then in summarising the causes of this relatively higher mortality he said: "In Europe, boys and girls are equally well cared for. Consequently, as boys are constitutionally more delicate than girls, by the time adolescence is reached, a higher death-rate has already obliterated the excess of males and produced a numerical equality between the two sexes. Later on in life, the mortality amongst males remains relatively high, owing to the risks to which they are exposed in their daily avocations; hard work, exposure in all weathers and accidents of various kinds combine to make their mean duration of life less than that of women, who are for the most part engaged in domestic duties or occupations of a lighter nature. Hence the proportion of females steadily rises. In India, the conditions are altogether different. Sons are earnestly longed for, while daughters are not wanted. This feeling exists everywhere, but it

varies greatly in intensity. It is strongest amongst communities such as the higher Rajput clans, where large sums have to be paid to obtain a husband of suitable status and the cost of the marriage ceremony is excessive and those like the Pathans who despise women and hold in derision the father of daughters. Sometimes the prejudice against daughters is so strong that abortion is resorted to when the midwife predicts the birth of a girl. Formerly, female infants were frequently killed as soon as they were born, and even now they are very commonly neglected to a greater or less extent. The advantage which nature gives to girls is thus neutralised by the treatment accorded to them by their parents. To make matters worse, they are given in marriage at a very early age, and cohabitation begins long before they are physically fit for it. To the evils of early child-bearing must be added unsidflid midwifery; and the combined result is an excessive mortality amongst young mothers. In India almost every woman has to face these dangers. Lastly, amongst the lower classes, who form the bulk of the population, the women often have to work as hard as, and sometimes harder than, the men, and they are thus less favourably situated in respect of their occupations than their sisters in Europe." It is but fair to say that this conclusion has been challenged by many Indian writers, who attribute far greater importance than the Chief Census Officer to the omission of females at the enumeration.

MARRIAGE.

Although recognised in some backward parts, polyandry is now rare in India. With orthodox Hindu marriage is a religious sacrament which cannot be revoked. The Mahomedans allow a man to divorce his wife without any special reason, but he then becomes liable to pay her dower. The permission is seldom acted upon. The Buddhists of Burma regard marriage merely as a civil contract, and either side can annul it. The Hindu law places no restriction on the number of wives a man may have; but most castes object to their members having more than one wife, except for special reasons. A Mahomedan may have four wives, but he also in practice is generally monogamous.

Marriage Statistics.—In the population of ages and religions, about half the males and one-third of the females are unmarried; 46 per cent. of the males and 48 of the females are married, and 5 and 17 per cent. respectively are widowed. A reference to the age statistics shows that the great majority of the unmarried of both sexes are very young children, three-quarters of the bachelors being under 15 years of age, while a somewhat larger proportion of the spinsters are under 10; only one bachelor in 24 is over 30, and only one spinster in 14 is over 15. At the higher ages practically no one is left unmarried, except persons suffering from some infirmity or disfigurement, beggars, prostitutes, concubines, religious devotees and mendicants and a few members of certain hypergamous groups who have been unable to effect alliances of the kind which alone are permitted to them by the rules of their community. It is the persons of the above clas-

ses who contribute the 4 per cent. of the males over 40, and the 1 per cent. of the females over 30 who are not, and never have been, married.

Marriage Universal.—This universality of marriage constitutes one of the most striking differences between the social practices of India and those of Western Europe. It has often been explained on the ground that, with the Hindus, marriage is a religious necessity. Every man must marry in order to beget a son who will perform his funeral rites and rescue his soul from hell. In the case of a girl it is incumbent on the parents to give her in marriage before she reaches the age of puberty. Failure to do so is punished with social ostracism in this world and hell fire in the next. But it is not only with the Hindus that marriage is practically universal; it is almost equally so with the Mahomedans, Animists and Buddhists.

Early Marriage.—Another striking feature of the Indian statistics as compared with those of Western Europe is the early age at which marriage takes place. According to M. Sundbarg's table showing the average distribution by age and civil condition of the people of Western Europe according to the censuses taken about the year 1880, of the population below the age of 20, only one male in 2,147 is married and one female in 142. In India on the other hand, 10 per cent. of the male, and 27 per cent. of the female, population below that age are married. The number of males below the age of 5 who are married is small, but of those aged 5 to 10, 4 per cent. are married, and of those aged 10 to

15, 13 per cent. At '15-20' the proportion rises to 32, and '20-30' to 69 per cent. Of the females under 5, one in 72 is married, of those between 5 and 10, one in ten, between 10 and 15, more than two in five, and between 15 and 20, four in five. In the whole of India there are 2½ million wives under 10, and 9 million under 15 years of age. The Hindu law books inculcate marriage at a very early age, while many of the aboriginal tribes do not give their girls in wedlock until after they have attained puberty.

Widowhood.—It is only when we come to a consideration of the widowed that we find a state of things peculiarly Indian and one that seems to be derived from the prescriptions of the Hindu law-givers. The proportion of widowers (5 per cent. of the total male population) does not differ greatly from that in other countries, but that of the widows is extraordinarily large, being no less than 17 per cent. of the total number of females, against only 9 per cent. in Western Europe. When we consider their distribution by age, the difference becomes more still striking, for while in western Europe only 7 per cent. of the widows are less than 40 years old, in India 28 per cent. are below this age, and 1·3 per cent. (the actual number exceeds a third of a million) are under 15, an age at which in Europe no one is even married.

The large number of widows in India is due partly to the early age at which girls are given in marriage, and partly to the disparity which often exists between the ages of husband and wife, but most of all to the prejudice against the re-marriage of widows. Many castes, especially the higher ones, forbid it altogether, and even where it is not absolutely prohibited, it is often unpopular. Although widow marriage is permitted by their religion, and the Prophet himself married a widow, the Mahomedans of India share the prejudice to some extent. How the re-marriage of widows first came to be objected to, it is impossible to say, but it seems highly probable that the interdiction originated amongst the Aryan Hindus, that it was confined at first to the higher castes, and that it has spread from them downwards.

Infant Marriage.—It is difficult to draw from the statistics any definite conclusion as to whether infant marriage is becoming more or less common, but so far as they go, they point to a slight diminution of the practice. The figures for 1901 were abnormal owing to the famines of 1897 and 1900, and it is safer to take the year 1891 as the basis of comparison. There are now 18 Hindu girls per mille who are married at the age of '0-5' as compared with only 16 at that time, but at the age '5-10' the proportion has fallen from 146 to 132 and at '10-15' from 542 to 488. Amongst Mahomedans the proportion at the first mentioned age-period has fallen from 7 to 5, at the second from 83 to 65 and at the third from 474 to 393.

The practice has been denounced by many social reformers, since Mr. Malabari opened the campaign a quarter of a century ago; and the Social Conference which holds its meetings annually in connection with the National Congress has made the abolition of child marriage one of the leading planks in its platform. It is, as we have seen, strongly discouraged by the Brahmoss in Bengal and the Aryas in Northern India. The more enlightened members of the higher castes who do not allow widows to re-marry are beginning to realise how wrong it is to expose their daughters to the risk of lifelong widowhood, and a feeling against infant marriage is thus springing up amongst them.

In two Native States action has been taken. In Mysore an Act has been passed forbidding the marriage of girls under eight altogether, and that of girls under fourteen, with men over fifty years of age. The object of the latter provision is to prevent those unequal marriages of elderly widowers with very young girls which are popularly believed to be so disastrous to the health of the latter, and which in any case must result in a large proportion of them leading a long life of enforced widowhood. The Gaekwar of Baroda, the pioneer of so much advanced legislation, has gone further. He passed for his State in 1904, in the face of a good deal of popular opposition, an "Infant Marriage Prevention Act", which forbids absolutely the marriage of all girls below the age of nine and allows that of girls below the age of twelve and of boys below the age of sixteen, only if the parents first obtain the consent of a tribunal consisting of the local Sub-Judge and three assessors of the petitioner's caste. Consent is not supposed to be given except on special grounds, which are specified in the Act.

Widow re-marriage.—The prohibition of widow marriage is a badge of respectability. Castes do not allow it rank higher on that account in social estimation. There is a strong tendency amongst the lower Hindu castes to prohibit, or at least, to discountenance, the marriage of widows. At the other end of the social structure there is a movement in the opposite direction. Many social reformers have inveighed against the condemnation of virgin widows to perpetual widowhood, and have pointed out that the custom is a modern innovation which was unknown in Vedic times. In many provinces recently there have been cases in which such widows have been given in marriage a second time, not only amongst Brahmoss and Aryas, who naturally lead the way, but also amongst orthodox Hindus. A number of such marriages have taken place amongst the Bhatias of the Bombay Presidency. It is said that in the United Provinces considerably more than a hundred widows have been re-married in the last ten years. The actual results no doubt are small so far, but the first step has been taken and the most violent of the opposition has perhaps been overcome.

EDUCATION.

The general education policy of the Government of India, and its results, are discussed in a special article on Education (*q. v.*) But we may conveniently here indicate some of the education tendencies revealed in the census returns.

Of the total population of India, only 59 persons

per mille are literate in the sense of being able to write a letter to a friend and to read his reply. The number who can decipher the pages of a printed book with more or less difficulty is no doubt much larger. Throughout India there are many Hindus who though unable to write can

drone out at least the more familiar parts of the Mahabharata or Ramayana to their neighbours, who feel that it is meritorious to listen to the recital of the sacred texts, even though they, and possibly the reader also, may not always fully understand the meaning. Similarly there are many Mahomedans, especially in Northern India, who can read the Koran, though they cannot write a word. Of this minor form of literacy the census takes no count. The number of persons who are literate in the sense in which the term was used at the present census is divided very unequally between the two sexes; of the total male population, 106 per mille are able to read and write, and of the female only 10. In other words there is only one literate female to every eleven males. If we leave out of account children under 15 years of age, the number of literate males per mille is 149, and that of literate females 13.

Education by Provinces.—Thanks to the free instruction imparted in the monasteries and the absence of the *pardah* system which hampers the education of females in other parts of India. Burma easily holds the first place in respect of literacy. In the whole population 222 persons per mille are literate and the proportion rises to 314 amongst persons over 15 years of age. In every thousand persons of each sex, 376 males and 61 females are able to read and write. Of the other main British provinces, Bengal and Madras come next with 77 and 75 literate persons per mille respectively. Bombay follows closely on their heels. Then after a long interval, come Assam, Bihar and Orissa and the Punjab. At the bottom of the list are the United Provinces and the Central Provinces and Berar, with 34 and 33 literate persons per mille respectively. Differences similar to those noticed above sometimes have their counterpart within provincial boundaries. Thus in Bihar and Orissa, the Orissa natural division has 64 literate persons per mille and the Chota Nagpur plateau only 28. In the Central Provinces and Berar, the proportion ranges from only 6 per mille in the Chota Nagpur States to 54 in the Nerbudda Valley.

Native States.—Education is more widely diffused in British provinces than in the Native States, which, taken as a whole, have only 79 males and 8 females per mille who are literate, as compared with 113 and 11 in British territory. The three Native States of Cochin, Travancore and Baroda, however, take rank above all British provinces except Burma, while in respect of female education Cochin divides with Burma the honours of first place. The Kashmir State where only 21 persons per mille can read and write, is in this respect the most backward part of India.

By Religion.—Of the different religious communities excluding the Brahmos and Aryas whose numbers are insignificant, the Parsis easily bear the palm in respect of education. Of their total number 711 per mille are literate, and the proportion rises to 831, if persons under 15 years of age are left out of account. Of the males nearly four-fifths are literate, and of the females nearly two-thirds. Amongst those over 15 years of age only 8 per cent. of the males and 26 per cent. of the females are unable to read and write. The Jains, who are mostly traders, come next, but they have only two literate persons to every five amongst the Parsis. Half the

males are able to read and write, but only 4 per cent. of the females. It is noticeable, however, that whereas the proportion of literate males is only slightly greater than it was at the commencement of the decade, that of literate females has doubled. The Buddhists follow closely on the Jains, with one person in four able to read and write. Here also we see the phenomenon of a practically unchanged proportion of literate males (40 per cent.) coupled with a large increase in that of literate females, which is now 6 per cent. compared with 4 per cent. in 1901. The Christians (22 per cent. literate) are almost on a par with the Buddhists, but in their case the inequality between the position of the two sexes, is much smaller, the proportion of literate females being nearly half that of males. In order to ascertain how far the high position of Christians is due to the inclusion of Europeans and Anglo-Indians, the figures for Indian Christians have been worked out separately. The result is somewhat surprising; for although the Indian converts to Christianity are recruited mainly from the aboriginal tribes and the lowest Hindu castes, who are almost wholly illiterate, they have, in proportion to their numbers, three times as many literate persons as the Hindus and more than four times as many as the Mahomedans. One Indian Christian in six is able to read and write; for males the proportion is one in four; and for females one in ten. The influence of Christianity on education is strikingly illustrated by the figures for the province of Bihar and Orissa, where the proportion of Indian Christians who are literate is 76 per mille, compared with only 5 per mille amongst their animistic congeners. It has to be remembered, moreover, that many of the Indian Christians had already passed the school-going age at the time of their conversion; the proportion who are able to read and write must be far higher amongst those who were brought up as Christians.

The Sikhs come next in order of merit, with one literate person in every fifteen; for males the ratio is one in ten and for females one in seventy. Here again, while the proportion for males shows only a slight improvement, that for females has doubled during the decade. The Hindus have almost as large a proportion of literate males per mille (101) as the Sikhs, but fewer literate females (8). The Mahomedans with only 69 and 4 per mille respectively, stand at the bottom of the list, except for the Animistic tribes of whom only 11 males and 1 female in a thousand of each sex are able to read and write. The low position of the Mahomedans is due largely to the fact that they are found chiefly in the north-west of India, where all classes are backward in respect of education, and in Eastern Bengal where they consist mainly of local converts from a depressed class. In the United Provinces, Madras and the Central Provinces and Berar they stand above or on an equality with the Hindus and the same is the case in Bombay excluding Sind. In Sind the Mahomedan population is exceptionally illiterate, but in the rest of the Presidency it consists largely of traders, and education is much more widely diffused amongst them than amongst Hindus. The figures for Hindus again are a general average for all castes, high and low. It will be seen further on that some of the higher Hindu castes

are better educated than the Buddhists while others are even less so than the Animists.

Increase of Literacy.—The total number of literate persons has risen during the decade from 15.7 to 18.6 millions or by 18 per cent. The number of literate males has increased by 15 and that of literate females by 61 per cent. The proportion who are literate per thousand males has risen from 98 to 106 and the corresponding proportion for females from 7 to 10. If persons under 15 years of age be excluded, the proportions are 138 and 149 for male and 8 and 13 for females. The great improvement in the proportion of literate females is most encouraging. It is true that too much stress should not be laid on this when the actual number is still so small, but, on the other hand, it must be remembered that the rate of increase was equally great in the previous decade, so that it has now been continuous for twenty years. The total number of females over 15 years of age who can read and write is now a million and a quarter compared with less than half a million twenty years ago.

Progress.—Before leaving these statistics of schools and scholars we may glance briefly at the progress which they show is being made. The total number of scholars in all kinds of educational institutions in 1891 was only 3.7 millions. In 1901 it had risen to 4.4, and in 1911 to 6.3 millions. 17.7 per cent. of the population of school-going age were at school in 1912 as

compared with 14.8 per cent. in 1907. Between 1891 and 1911 the number of students in secondary schools and Arts Colleges has doubled, and the number in primary schools has increased by 67 per cent., the proportion ranging from 39 per cent. in Bombay to 204 per cent. in the United Provinces. Excluding Madras, where a school final examination has recently taken the place of the Matriculation, or Entrance examination of the University, the number of persons passing that examination has risen from 4,079 in 1891 to 10,512 in 1911. Including Madras the number who passed the Intermediate examination in Arts or Science has risen during the same period from 2,055 to 5,141, and that of those who obtained a degree in Arts, Science, Medicine or Law from 1,437 to 5,373. The general conclusion appears to be that, while the general rate of progress is far greater than would appear from a comparison of the census returns of 1901 and 1911, it is most marked in respect of secondary education.

There was a continuous fall, both in the number and the proportion of persons afflicted from 1881 to 1901; and this has now been followed by a move in the other direction. Though the proportion is smaller the number of the insane and the deaf-mutes is now about the same as it was thirty years ago. The number of lepers and blind however is less by about a sixth than it then was.

Infirmities.

The total number of persons suffering from each infirmity at each of the last four censuses is shown in the following table:—

Infirmity.	Number afflicted.			
	1911	1901	1891	1881
Insane	81,006 26	66,205 23	74,279 27	81,132 35
Deaf-mutes	199,891 84	153,168 52	196,861 75	197,215 86
Blind	443,653 142	354,104 121	458,868 167	526,748 229
Lepers	109,094 35	97,340 33	126,244 46	134,968 57
Total ..	833,644 267	670,817 229	856,252 315	937,063 407

NOTE.—The figures in heavier type represent the proportion per 100,000 of the population.

Insanity.—In respect of the prevalence of insanity, India compares very favourably with European countries. According to the latest returns, the proportion of persons thus afflicted in England and Wales is 364 per hundred thousand of the population, or fourteen times the proportion in India. This may be due partly to the fact that the English statistics include the weak-minded as well as those who are actively insane, and to the greater completeness of the return in a country where the majority of the mentally afflicted are confined in asylums; but the main reason no doubt is to be found in the comparatively tranquil life of the native of India. It is well known that insanity increases with the spread of civilisation, owing to the greater

wear and tear of nerve tissues involved in the struggle for existence.

The total number of insane persons exceeds by 9 per cent. that returned in 1891, but their proportion per hundred thousand of the population has fallen from 27 to 26. The decline is fairly general, the chief exceptions being the United Provinces, the North-West Frontier Province and four Native States in the peninsular area. In the United Provinces the number of the insane per hundred thousand of the population has risen from 12 to 18. No satisfactory explanation of this large increase is forthcoming.

Deaf-Mutes.—By deaf-mutism is meant the congenital want of the sense of hearing which, in the absence of special schools, such as are only

just beginning to appear in India, necessarily prevents the sufferer from learning to talk. Clear instructions were given to the enumerators to enter only persons who were congenitally afflicted. Some few, perhaps, may have been included in the return who had lost the power of speech or hearing after birth, but the total number of such mistakes is now very small. In India as a whole 74 males and 53 females per hundred thousand are deaf and dumb from birth. These proportions are much the same as those obtaining in European countries.

Blindness.—In India as a whole fourteen persons in every ten thousand of the population are blind, as compared with from eight to nine in most European countries and in the United States of America. It is a matter of common observation that blindness is ordinarily far more common in tropical countries than in those with a temperate climate. It is, however, less common in India than in parts of Eastern Europe; in Russia, for instance, nineteen persons in every ten thousand are blind.

Lepers.—In India as a whole 51 males and 18 females per hundred thousand persons of each sex are lepers. Of the different provinces, Assam suffers most, then Burma, and then in order Bihar and Orissa, the Central Provinces and Berar, Madras, Bengal, Bombay, the United Provinces, the Punjab and the North-West Frontier Province. In the two last-mentioned provinces there are only 17 male and 8 female lepers per hundred thousand of each sex. The occurrence of leprosy is very local and its prevalence varies enormously within provincial boundaries.

The number of lepers has fallen since 1891 from 126 to 109 thousand, a drop of more than 13 per cent. When it is remembered that the number of persons suffering from the other three infirmities taken together has remained almost stationary, it may be concluded that the decrease in the reported number of lepers is genuine and indicates a real diminution in the prevalence of

the disease. It is possible that this is partly the result of the improved material condition of the lower castes, amongst whom leprosy is most common, and of a higher standard of cleanliness. The greater efforts which have been made in recent years to house the lepers in asylums may also have helped to prevent the disease from spreading. The total number of asylums in India is now 73, and they contain some five thousand inmates, or about 4.7 per cent. of the total number of lepers. This may not seem much, but it has to be remembered that the movement is still in its infancy and that progress has been very rapid in recent years. Complete statistics for 1901 are not readily available, but it is known that in the two provinces of Bengal and Bihar and Orissa, the number of lepers in asylums was then only about half what it is now. The greater part of the credit for the provision of asylums for these unfortunate persons belongs to the Mission for Lepers in India and the East, which receives liberal help from Government. Its latest report shows that there are 3,537 lepers in the forty asylums maintained by the Society.

The belief is growing that leprosy is communicated from one human being to another by some insect, and two South African doctors have recently published papers implicating the bed bug (*acanthia lectularia*). If this theory be correct it is obvious that the segregation of lepers in asylums must reduce the number of foci of the disease, and to that extent prevent it from spreading. It is worthy of note that in many of the districts where the disease was most prevalent in 1891, there has since been a remarkable improvement. Chamba which in 1891 had 34 lepers in every ten thousand of its population, now has only 15; in Birbhum the corresponding proportion has fallen from 35 to 16, in Bankura from 36 to 23, in Simla 29 to 18, in Dehra Dun from 20 to 11, in Garhwal from 17 to 10, in Burdwan from 22 to 14 and in North Arakan from 28 to 20.

OCCUPATIONS.

Nowhere are the many points of difference in the local conditions of India, as compared with those of western countries, more marked than in respect of the functional distribution of the people. In England, according to the returns for 1901, of every hundred actual workers, 58 are engaged in industrial pursuits, 14 in domestic service, 13 in trade and only 8 in agriculture, whereas in India 71 per cent. are engaged in pasture and agriculture and only 29 per cent. in all other occupations combined. The preparation and supply of material substances afford a means of livelihood to 19 per cent. of the population (actual workers) of whom 12 per cent. are employed in industries, 2 in transport and 5 in trade. The extraction of minerals supports only 2 persons per mille; the civil and military services support 14, the professions and liberal arts 15, and domestic service 18 persons per mille. The difference is due to the extraordinary expansion of trade and industry which has taken place in Western Europe during the last century in consequence of the discovery of the steam engine, and to the great improvement in means of transport and the use of mechanical power in factories of all kinds which have resulted therefrom. In Germany, sixty years ago, the agricultural population was

very little less than it is at the present time in India. There are, as we shall see further on, indications that in the latter country also great changes are impending; and it is not unlikely that, as time goes on, the functional distribution of the people will become less dissimilar from that now existing in Europe.

The village.—Until the recent introduction of western commodities, such as machine-made cloth, kerosine oil, umbrellas and the like, each village was provided with a complete equipment of artisans and menials, and was thus almost wholly self-supporting and independent. Its chamars skinned the dead cattle, cured their hides, and made the villagers' sandals and thongs. Local carpenters made their ploughs, local blacksmiths their shares, local potters their utensils for cooking and carrying water, and local weavers their cotton clothing. Each village had its own oil-pressers, its own washermen, and its own barbers and scavengers. Where this system was fully developed, the duties and remuneration of each group of artisans were fixed by custom and the caste rules strictly prohibited a man from entering into competition with another of the same caste. The barber, the washerman, the blacksmith, etc.,

all had their own definite circle within which they worked, and they received a regular yearly payment for their services, which often took the form of a prescriptive share of the harvest, apportioned to them when the crop had been reaped and brought to the threshing floor.

Village sufficiency declining.—Even in India proper the village is no longer the self-contained industrial unit which it formerly was, and many disintegrating influences are at work to break down the solidarity of village life. The rising spirit of individualism, which is the result of modern education and western influences, is impelling the classes who perform the humbler functions in the economy of village life to aspire to higher and more dignified pursuits. There is also a tendency to replace the prescriptive yearly remuneration by payment for actual work done. In many parts for instance, the village Chamar is no longer allowed the hides of dead cattle as his perquisite, but receives instead a payment for removing the cattle and for skinning them; and the hides are then sold to a dealer by the owner of the animal. Improved means of communication have greatly stimulated migration and the consequent disruption of the village community, and by facilitating and lowering the cost of transport of commodities, have created a tendency for industries to become localised. The extensive importation of cheap European piecegoods and utensils, and the establishment in India itself of numerous factories of the western type, have more or less destroyed many village industries. The high prices of agricultural produce have also led many village artisans to abandon their hereditary craft in favour of agriculture. The extent to which this disintegration of the old village organisation is proceeding varies considerably in different parts. The change is most noticeable in the more advanced provinces, whereas in comparatively backward tracts, like Central India and Rajputana, the old organisation remains almost intact.

Agriculture.—India is pre-eminently an agricultural country. Of its total population 72 per cent. are engaged in pasture and agriculture, viz., 69 per cent. in ordinary cultivation and 3 per cent. in market gardening, the growing of special products, forestry and the raising of farm stock and small animals. The 217 million persons supported by ordinary cultivation comprise nearly 8 million landlords, 167 million cultivators of their own or rented land, over 41 million farm servants and field labourers and less than a million estate agents and managers and their employes.

On the average, in the whole of India, every hundred cultivators employ 25 labourers, but the number varies in the main provinces from 2 in Assam, 10 in the Punjab, 12 in Bengal and 16 in the United Provinces to 27 in Burma, 33 in Bihar and Orissa, 40 in Madras, 41 in Bombay and 59 in the Central Provinces and Berar. These local variations appear to be independent alike of the fertility of the soil and of the density of population. The conclusion seems to be that the differences are due to social, rather than economic, conditions, and that those provinces have most field labourers which contain the largest proportion of the depressed castes who are hereditary agrestic serfs.

Of the two million persons supported by the growing of special products rather more than half were returned in tea, coffee, cinchona, indigo, etc., plantations and the remainder in fruit, vegetable, betel, vine, arecanut, etc., growers. Of those in the former group, nearly nine-tenths were enumerated in the tea-gardens of Assam (675,000) and Bengal (248,000) and most of the remainder in the coffee, tea, rubber and other plantations of Southern India.

Of the 16 persons per mille who were classed under Raising of farm stock, nearly four-fifths were herdsmen, shepherds, and goatherds, rather more than one-seventh were cattle and buffalo-breeders, and keepers and one-eleventh sheep, goat and pig breeders.

Fishing and Hunting.—In the whole of India about 2 million persons, or 6 per mille subsist by fishing and hunting. Of these, all but a small fraction are fishermen. About half the total number are found in the two provinces of Bengal (644,000) and Madras (313,000). The number who live by this occupation is exceptionally small in the United Provinces (38,000) and Punjab (10,000). The Punjab Superintendent says that, owing to the destruction of immature fish and fry and the obstruction of the free passage of fish to their spawning grounds, the five thousand odd miles of large rivers and major canals in his Province probably produce less food than an equal volume of water in any other part of the world. The sea fisheries of India, though now known to be very valuable, are at present but little exploited.

Mines.—In the whole of India only 530,000 persons or 17 in every ten thousand are supported by the extraction of minerals. Coal mines and petroleum wells account for about half the total number (277,000). The coal fields of Bihar and Orissa support 127,000 persons and those of Bengal 115,000. In the Manbhum district, which contains the Jherria, and part of the Raniganj coal field, 111,000 persons or 7 per cent. of the inhabitants are supported by work in the collieries. Though the Raniganj coal field was discovered as far back as 1774 many years elapsed before much use was made of the discovery. In 1840 the total quantity of coal sent to Calcutta was only 36,000 tons. It rose to 220,000 tons in 1853 and to six million tons in 1901. Since then the growth has been very rapid. The output in 1911 from the coal mines of Bengal and Bihar and Orissa exceeded eleven million tons. In the same year the total yield for all India was twelve million tons. Of the latter quantity nearly one million tons were exported, and four million were used by the railways. The total output however is still trivial compared with that of the United Kingdom, which amounted in 1911 to 272 million tons. Most of the persons employed in the mines of Bengal and Bihar and Orissa are aboriginal or quasi-aboriginal; about half are Bauris and Santals, and many of the remainder belong to the Bhuiya, Chamar or Mochi, Kora, Rajwar, Dosadh and Musahar castes. The great majority are recruited locally. The coal mines of Hyderabad, Assam, the Central Provinces and Berar, and the Punjab support between them only about 27,000 persons.

Metals.—Of the 98,000 persons supported by mining for metals, more than half were returned

in the Mysore State, and of these the great majority were employed in the gold mines of Kolar, where for some years past the value of the gold produced has been about £2,000,000 per annum. The mines in the Central Provinces and Berar, which support 21,000 persons, are principally for the extraction of manganese. The mining of this ore was greatly fostered by the Japanese War, which caused Russia to discontinue her exports of it for the time. There has since been a period of depression, which seems now to have come to an end. Manganese is extracted elsewhere also, *e.g.*, in Mysore and Madras. In Burma tin and lead are extracted as well as silver and wolfram in small quantities. Iron ore is worked in various places, but chiefly in Mayurbhanj which supplies the raw material for Messrs. Tata and Company's ironworks at Sakchi.

Of the 75,000 persons supported by work in quarries and mines for non-metallic minerals, other than coal and salt, two-fifths were enumerated in Bombay, where the quarrying of stone and limestone is an important business chiefly in the neighbourhood of Bombay city. In Bihar and Orissa and Madras mica mining is of some importance.

The extraction of salt and saltpetre supports 78,000 persons. Nearly a third of the total number are found in Bihar and Orissa where the Nuniyas are still largely employed in digging out and refining saltpetre. This industry is carried on also in the Punjab. Rock salt is mined in the same province and in Rajputana.

The total number of persons employed in the extraction of minerals has risen during the decade from 235 to 517 thousand. The most noticeable increase is in Coal mines and petroleum wells which embrace nearly three times as many persons as in 1901. The bulk of the increase has occurred in Bengal and Bihar and Orissa, but it is to be noted that Hyderabad and the Central Provinces and Berar which now contribute about 12,000 persons to this group gave practically none ten years previously. Miners for metals are 2½ times as numerous as they were in 1901.

Industries.—Of the 35·3 million persons dependent on industrial occupations, nearly one-fourth, or 2·6 per cent. of the total population, are supported by textile industries. Of these, the most important, from a numerical point of view, are industries connected with cotton. The number of persons supported by cotton spinning, sizing and weaving is close on 6 millions, and another half million are employed in ginning, cleaning and pressing the raw material. The proportion of the population supported by cotton spinning, sizing and weaving is 37 per mille in the Punjab, 29 in Bombay and Rajputana, 27 in Madras, 22 in the Central Provinces and Berars and 18 in the United Provinces. In Burma, Bihar and Orissa, Bengal and Assam it is much smaller, ranging only from 8 to 11 per mille. Nearly two-fifths of a million persons are supported by rope, twine and string making, and more than a third of a million by jute spinning, pressing and weaving. Other important textile industries are wool spinning and weaving, silk spinning and weaving, and dyeing and printing, *etc.*, each of which supports from a quarter to a third of a million persons. It is clear there-

fore that so far as India is concerned, in spite of the growing number of cotton mills in the Bombay Presidency and elsewhere, the hand industry still, to a great extent, holds its own. Only 13,000 persons are employed in silk spinning and weaving factories, 7,000 in woollen factories including those for the making of carpets and even smaller numbers in other factories of this class. Some of these textile industries are very local. Those connected with jute are practically confined to Bengal, in which province nine-tenths of the persons supported by them were enumerated. More than half the persons dependent on rope, twine and string making and on working in 'other fibres' chiefly coir, and palmyra fibre were enumerated in Madras and its Native States and a quarter of those supported by wool industries in Hyderabad. Half the silk spinners and weavers are found in two provinces, Bengal and Madras. The dyeing, bleaching and printing of textiles and lace, crape and similar industries are almost unknown in Assam, Bengal, Burma and the Central Provinces and Berar.

Growth of Industry.—As compared with 1901 there has been a decrease of 6·1 per cent. in the number of persons supported by textile industries. This is due mainly to the almost complete extinction of cotton spinning by hand. Weaving by hand has also suffered severely from the competition of goods made by machinery both in Europe and in this country. There has been a large increase in the number of Indian cotton mills, but as the output per head in factories is far greater than that from hand-loom, the addition of a given number of factory hands involves the displacement of a far larger number of hand workers.

Hides.—As compared with 1901, a large decline in the number returned as general workers in hides is partly compensated for by an increase in shoe, boot and sandal makers. In the two heads taken together there has been a drop of about 6 per cent. During the same period the number of hide dealers has more than doubled. Owing to the growing demand for hides in Europe and America and the resulting high prices, the export trade in hides has been greatly stimulated. The local cobbler, on the other hand, having to pay more for his raw material and feeling the increasing competition of machine-made goods has been tempted to abandon his hereditary craft for some other means of livelihood, such as agriculture or work in factories of various kinds.

Woodworkers.—Wood cutting and working and basket making support 2·5 and 1·3 million persons, respectively, or 3·8 million in all. The number of factories devoted to these industries is still inconsiderable. Saw mills and timber yards each employ some 12,000 persons and carpentry works about 5,000. There is only one cane factory with 46 employees.

Metal workers.—The workers in metals are only about half as numerous as those in wood and cane. About three-quarters of the persons in this order are general workers in iron, and one-seventh are workers in brass, copper and bell-metal.

The total number of persons dependent on metal industries shows a decline of 6·6 per cent. as compared with 1901.

Earthenware.—The manufacture of glass, bricks, and earthenware supports in all 2·2 milli-

on persons. Seven-eighths of these are the ordinary village potters who make the various earthenware utensils for cooking and storing water which are required by the poorer classes, as well as tiles, rings for wells and the like. In most parts of India the potter, like the carpenter, oil-presses, blacksmith and cobbler, is found in practically every village.

Chemicals.—In a country like India, whose economic development is still backward, it is not to be expected that a large number of persons should be engaged in industries connected with chemical products. The total number returned as supported by these industries exceeds a million but it shrinks to less than 100,000 if we exclude manufacture and refining of vegetable and mineral oils. The 1·1 million persons included in this group are almost entirely village artisans who extract oil from mustard, linseed, etc., grown by their fellow villagers.

Food Industries.—Of the 3·7 million persons supported by food industries the great majority follow occupations of a very primitive type. Rice pounders and huskers and flour grinders number 1·6 million, grain parchers, etc., 0·6 million, and toddy drawers about the same. There are 352,000 butchers, 281,000 sweetmeat makers, etc., and 97,000 bakers and biscuit makers. The other five heads of the scheme contain between them only 227,000 persons. The principal factories in connection with food industries are flour and rice mills, which employ 42,000 persons, sugar factories 8,000, opium, ganja and tobacco factories 7,000 and breweries 5,000.

Dress.—In all 7·8 million persons are supported by industries of dress and the toilet. Of these 1·3 millions are grouped under the head tailors, milliners, dressmakers, etc., and 2·1 million under each of the heads (a) shoe, boot and sandal makers, (b) washermen, cleaners and dyers, and (c) barbers, hair-dressers and wig-makers.

Transport.—Transport supports about five million persons, or 16 per mille of the population, viz., transport by water one million, transport by road 2·8 million, transport by rail one million, and the post, telegraph and telephone services 0·2 million. Transport by water, about three-fifths are owners of country boats and their boatmen; nearly one-sixth are employed on inland steamers and ocean-going vessels of all kinds, one-sixth are engaged in the construction and maintenance of canals, and one-twentieth in the management and upkeep of harbours. Transport by road includes one million carters and cart-owners, more than half a million porters and messengers and considerably less than that number of owners and drivers of pack animals. Palki owners and bearers number 202,000 and persons engaged on road construction and maintenance 663,000.

Trade.—The number of persons dependent on trade for their livelihood is 17·8 millions, or 6 per cent. of the population. Of these, more than half are supported by trade in food stuffs, including 2·9 million grocers and sellers of vegetable oil, salt and other condiments, who are for the most part the petty village shop-keepers, commonly known as salt and oil sellers; 2·2 million grain and pulse dealers; 1·6 million betel leaf, vegetables and fruit sellers, and nearly a million fish vendors. Trade in textiles is the

next most important item, supporting 4 per mille of the population. In connection with these figures, it is necessary to draw attention to the great difference which exists between the economic conditions of India and those of Europe. In Europe the seller is almost invariably a middleman, whereas in India he is usually the maker of the article, and is thus classified under the industrial and not the commercial head.

Professions.—The public administration and the liberal arts support 10·9 million persons or 35 per mille, namely, public force 2·4 million, public administration 2·7 million, the professions and liberal arts 5·3 million, and persons of independent means about half a million. The head Public force includes the Army (0·7 million), the Navy (less than 5,000) and the Police (1·6 million). India has practically no navy and her army is exceptionally small, as compared with those of European countries. The number of persons actually employed in it is only 384,000 or 1 per mille of the population, as compared with 4 per mille in England and 10 in Germany. The figures for Police include village watchmen and their families. The real number in this group is greater than that shown in the census tables; many of these village officials have other means of subsistence, and the latter were sometimes shown as their principal occupation. Under the head Public administration are classed only those persons who are directly engaged in the Executive and Judicial administration and their establishments, whether employed directly under Government or under a municipality or other local body. Employees of Government and local bodies who have a specific occupation of their own, such as doctors, printers, school-masters, land surveyors, etc., are shown under the special heads provided for these occupations. Of the 5·3 million persons supported by the professions and liberal arts, Religion accounts for rather more than half, Letters and the arts and sciences for more than a sixth, Instruction and Medicine for one-eighth, and Law for one-eighteenth. The main head Religion contains 1·6 million priests, ministers, etc., 0·7 million religious mendicants, 0·4 million pilgrim conductors, circumciser and persons engaged in temples, burial or burning ground service, and 0·06 million catechists and other persons in church and mission service. Of Law, more than half are lawyers, law agents and mukhtiaris and the remainder lawyers' clerks and petition writers. More than two-thirds of the persons under the Medical head are medical practitioners of various kinds, including dentists: the remainder are midwives, vaccinators, compounders, nurses, etc. The real number of persons who act as midwives must exceed considerably that shown in the return. This service is usually performed by the wife of the village scavenger or other person of low caste; and she must often have been returned under her husband's occupation. Nearly three-fourths of the persons classed under Letters and the arts and sciences are found in Music composers and masters, players on musical instruments, singers, actors and dancers. The bulk of these are village drummers, whose services are invariably requisitioned on the occasion of marriages and religious festivals.

Factories.—There are in the whole of India 7,113 factories employing 2·1 million persons or 7 per mille of the population. Of these per-

sons, 810,000, or two-fifths of the total number are employed in the growing of special products, 558,000 in textile industries, 224,000 in mines, 125,000 in transport, 74,000 in food industries, 71,000 in metal industries, 49,000 in glass and earthenware industries, the same number in industries connected with chemical products and 45,000 in industries of luxury. Of the special products, tea (703,000 employees) is by far the most important. The number of tea gardens is not much more than double that of coffee plantations, but twelve times as many persons are employed on them. The coffee plantations are four times as numerous as indigo concerns and employ twice as many labourers. Of the labourers on tea gardens, 70 per cent. are returned by Assam and 27 per cent. by Bengal. Madras, Mysore and Coorg contain between them practically all the coffee plantations, and Bihar and Orissa all the indigo factories. Of the persons working in mines, 143,000, or 64 per cent. are found in collieries, eight-ninths of them being in the two provinces of Bihar and Orissa and Bengal. The number of persons engaged in gold mines is about one-fifth of the number in the coal mines: nine-tenths of them were returned from Mysore. Of the 558,000 workers, in textile industries, cotton mills contribute 308,000 and jute, hemp, etc., 222,000. About two-thirds of the persons employed in cotton mills are found in the Bombay Presidency, from 8 to 9 per cent. in the Central Provinces and Berar and Madras, and about half this proportion in the United Provinces and Bengal. Jute mills are a monopoly of Bengal. Of the industries connected with transport, railway workshops are by far the most important, and afford employment to 99,000 persons, or 79 per cent. of the total number of persons engaged in these industries: about one-fourth of them are found in Bengal and one-sixth in Bombay. Of the factories connected with food industries, the most prominent are rice and flour mills. These employ 42,000 persons, of whom nearly three-fourths are engaged in the rice mills of Rangoon and other places in Burma.

Indians and Europeans.—The proportion of Indians to Europeans varies considerably in different classes of factories. The great majority of the larger concerns are financed by European capital, and in such cases management or direction is generally European, and the Indians shown under this head are engaged for the most part on supervision and clerical work. In Assam where 549 tea gardens are owned by Europeans and 60 by Indians, there are 536 European and 73 Indian managers. In the coffee plantations of Madras and Mysore the same principle is apparent. The jute mills of Bengal are financed by European capital and the managers are all Europeans; while in

Bombay where Indians own 110 of the cotton spinning and weaving mills, and share 25 with Europeans, and the latter own exclusively only 12, all but 43 of the managers are Indians. Sometimes the proportion of Europeans employed in supervision, etc., varies with the character of the work. In the gold mines where the planning and control of the deep underground workings require a high degree of skill, Europeans outnumber Indians in the ratio of nearly 4 to 1, whereas in the collieries Indians are twelve times as numerous as Europeans.

Anglo-Indians.—Anglo-Indian is used at the census as the designation of the mixed race, descended usually from European fathers and Indian mothers, which was formerly known as Eurasian. The total number of persons returned under this head, excluding Feringis, is now 100,451 or 15 per cent. more than in 1901. Anglo-Indians are most numerous in Madras (26,000) and Bengal (20,000). In the United Provinces, Bombay and Burma the number ranges from 8 to 11 thousand, and in Bihar and Orissa, the Central Provinces and Berar and the Punjab it is about 3,500. In the States and Agencies Anglo-Indians aggregate only 14,000, more than half being found in Mysore and Hyderabad. The increase in their number as compared with 1901 may be due partly to some Anglo-Indians having returned themselves under their new designation who would have claimed to be Europeans if Eurasian had been the only alternative and it is also perhaps due in part to a growing tendency amongst certain classes of Indian Christians to pass themselves off as Anglo-Indians. The Punjab Superintendent accounts in this way for the greater part of the increase of 42 per cent. in the number returned as Anglo-Indians in his province. The proportional increase is also large in the United Provinces, Bombay, Burma, the Central Provinces and Berar and the Cochin State. Although Madras still has the largest number of Anglo-Indians, the total is slightly less now than it was twenty years ago. Possibly this is because more careful enumeration has reduced the number of Indian Christians who thus returned themselves. The number of Anglo-Indians in Burma is remarkably large in view of the comparatively short time that has elapsed since it became a British possession and the strength of its European population. In this community there are 984 females per thousand males, or slightly more than the corresponding proportions in the general population of India. More than half of the persons returned as Anglo-Indians are Roman Catholics, and one-third are Anglicans; the number of Presbyterians, Baptists, and Methodists ranges from 2 to 2½ per cent.

Domestic Servants.

The relationship of master to servant in India is a subject to which attention is frequently directed in the Press by complaints about the alleged deterioration of domestic servants and the hardships to which employers are subjected by the boycotting action of discharged servants. The remedy most commonly propounded for misbehaviour on the part of servants is registration with a view to checking the use of false testimonials, or "chits," and to enabling masters to obtain certain information as to the character of the persons they employ. This mode of procedure is of German origin, for the old Prussian Servants' Ordinances (*Gesindeordnung*) were supplemented in 1854 by a law, applying only to agricultural labourers and domestic servants, which punishes breach of contract, and since then various State laws dealing with domestic servants have been passed in Germany. The conditions are not, however, analogous for the servant keeping class in India is proportionately larger than in Europe, as also is the number of servants kept by each individual.

The first attempt in the East to deal with the problem by legislation was made in **Ceylon**. The act dealing with the registration of domestic servants in that Colony is comprised in Ordinance No. 28 of 1871. It extends to all classes of domestic servants, hired by the month or receiving monthly wages, and the word 'servant' means and includes head and under-servants, female servants, cooks, coachman, horsekeepers and house and garden coolies. The Act came into operation in 1871 and empowered the Governor to appoint for the whole of the Island or for any town or district, to which the Ordinance is made applicable, a registrar of domestic servants, who is to be under the general supervision and control of the Inspector-General of Police. A registry is kept by the registrar of all domestic servants employed within his town or district, and he has to enter therein the names of all the servants, the capacities in which they are employed at the time of such registration, the dates of their several engagements and such memorandum of their previous services or antecedents as they may desire to have recorded in the register. But the registrar must, previous to his entering all these details, satisfy himself as to the credibility of the statements made to him. Any person, who may not have been a domestic servant before, but who is desirous of entering domestic service, has to submit an application to the registrar, and if the registrar is satisfied that there are reasonable grounds to believe that the applicant is a fit and proper person to enter domestic service he shall enter his name in the register, recording what he has been able to learn respecting the person's antecedents together with the names of any persons who are willing to certify as to his respectability. If the applicant is unable to produce satisfactory or sufficient evidence as to his fitness for domestic service the registrar may grant him "provisional" registration, to be thereafter converted into "confirmed" registration according to the result of his subsequent service. If the registrar is satisfied that the applicant is not a fit and proper person he should withhold registration altogether but in such a case he must report his refusal to register to the Inspector-General of Police.

Every person whose name has been registered in the general registry is given a pocket register containing the full particulars of the record made in the general registry. No person can engage a servant who fails to produce his pocket register or whose pocket register does not record the termination of his last previous service, if any. On engaging a servant the master has to enter forthwith in the pocket register the date and capacity in which such servant is engaged and cause the servant to attend personally at the registrar's office to have such entry inserted in the general registry. Similarly, in case the master discharges a servant he must insert in the pocket register the date and cause of his discharge and the character of the servant. Provided that if for any reason he be unwilling to give the servant a character or to state the cause of his discharge he may decline to do so. But in such a case he must furnish to the registrar in writing his reasons for so refusing. If the servant on dismissal fails to produce his pocket register the master must notify that fact to the registrar. Whenever any fresh entry is made in the pocket register the servant is bound to attend the registrar's office to have such an entry recorded in the general registry. Every servant whose name is registered shall, if he subsequently enters service in any place not under the operation of the Ordinance, attend personally at the nearest police station on his entering or leaving such service and produce his pocket register to the principal officer of police at such station in order to enable the police officer to record the commencement or termination of the service. The police officer has then to communicate it to the registrar of the town or district in which such servant was originally registered.

Various penalties of fine as well as of imprisonment are imposed for violation of any of the acts required to be done or duties imposed by the Act on the various persons mentioned below. As respects masters if they fail to fulfil any of the duties imposed on them by the Act they expose themselves to a liability of their being fined to the extent of Rs. 20. Similarly a servant, who fails to fulfil any of the duties imposed on him by the Act is liable to pay a fine not exceeding Rs. 20. But in case he gives any false information to the registrar or to any other person on matters in which he is required by this Ordinance to give information he is liable to a fine not exceeding Rs. 50 or to imprisonment, with or without hard labour, not exceeding 3 months. A fee of 25 cents is charged to the master on engaging a new servant, a like fee of 25 cents is charged to the servant on his provisional registration, or on registration being confirmed, or for registration of previous service or antecedents. But in case of loss or destruction of the pocket register the servant has to pay one rupee for the issue of a duplicate pocket register.

A similar Ordinance (No. 17 of 1914) has been introduced in the **Straits Settlements**, where its operation has been limited to such local areas as may be declared by the Governor in Council, and its application within such areas has been restricted to the class of householders who are expected to desire the benefit of the provisions,

Education.

Indian education is unintelligible except through its history. Seen thus, it affords the spectacle of a growth which, while to one it will appear as a blunder based on an initial error easily avoided, to another it stands out as a symbol of sincerity and honest endeavour on the part of a far-sighted race of rulers whose aim has been to guide a people alien in sentiments and prejudices into the channels of thought and attitude best calculated to fit them for the needs of modern life and western ideals. There is to-day no subject in the whole area of administrative activity in India which presents greater complexities and differences of opinion than education. The Indian, stung to the quick by the illiteracy around him, demands a very rapid expansion of educational facilities, with perhaps an insufficient regard for the formulation of a policy to regulate such an expansion; the official, overweighted by his responsibility for the maintenance of law and order, is apt to look with disfavour upon the activities of private enterprise in the field of education and, in his efforts to improve the quality, to disregard the quantity of training to be provided in the schools and colleges; and the teacher, harassed by annoying restrictions on his freedom and disheartened by his poverty, is disinclined for changes lest they make his lot even more intolerable than before.

The Introduction of Western Learning

—In the early days of its dominion in India, the East India Company had little inclination for the doubtful experiment of introducing western learning into India. Warren Hastings, the dominating figure of the time, was a genuine admirer of the laws and literature of the East. His policy was to enable the ancient learning to revive and flourish under the protection of a stable government, and to interfere as little as possible with the habits and customs of the people. Even the Act of 1813 which set apart a lakh of rupees for the introduction and promotion of a knowledge of the sciences was interpreted as a scheme for the encouragement of Sanskrit and Arabic. In the following year the Court of Directors instructed the Governor-General to leave the Hindus "to the practice of usage, long established among them, of giving instruction in their own homes, and to encourage them in the exercise and cultivation of their talents by the stimulus of honorary marks of distinction and in some cases by grants of pecuniary assistance."

It was from sources other than Government that the desire for western knowledge arose in India. In 1816, David Hare, an English watchmaker in Calcutta, joined hands with the enlightened Brahmin, Mohan Roy, to institute the Hindu College for the promotion of western secular learning. The new institution was distrusted both by Christian missionaries and by orthodox Hindus, but its influence grew apace. Fifteen years later, the Commit-

tee of Public Instruction in Bengal reported that a taste for English had been widely disseminated and that independent schools, conducted by young men reared in the Hindu College, were springing up in every direction. In Bombay, the Elphinstone Institution was founded in memory of the great ruler who left India in 1827. In Madras, the Presidency College was founded in 1841. A still more remarkable innovation was made in 1835 by the establishment of the Calcutta Medical College, whose object was to teach "the principles and practice of medical science in strict accordance with the mode adopted in Europe." Many pronounced the failure of the undertaking to be inevitable; for, under the Hindu custom the higher castes were forbidden to touch the dead. This obstacle was surmounted by Madhusudan Gupta who, with a few courageous pupils, began the dissection of a human body. From that time onward Indians of the highest castes have devoted themselves with enthusiasm and with success to the study of medicine in all its branches.

Another impetus to the introduction of western learning was the devotion of **Christian missionaries**. The humanitarian spirit, which had been kindled in England by Wesley, Burke and Wilberforce, influenced action also in India. Carey, Marshman and Ward opened the first missionary College at Serampore in 1818; and twelve years later, Alexander Duff reversed the whole trend of missionary policy in India by his insistence on teaching rather than on preaching, and by the foundation of his school and College in Calcutta. In Madras, the missionaries had been still earlier in the field; for as early as in 1787 a small group of missionary schools were being directed by Mr. Schwarz. The Madras Christian College was opened in 1837. In Bombay, the Wilson School (afterwards College) was founded in 1834.

Macanlay's famous minute of 1835 marks the somewhat tardy acceptance by Government of the new policy. Government then determined, while observing a neutrality in religious matters to devote its available funds to the maintenance of secondary schools and colleges of western learning to be taught through the medium of English. But this decision did not entail that Oriental learning should be neglected: still less that the development of the vernaculars should be discouraged. Other changes powerfully contributed to the success of the new system. The freedom of the press was established in 1835: English was substituted for Persian as the language of the Courts in 1837 and in 1844 Lord Hardinge ordained that preference in Government appointments should be given to those who had received a western education. In the following decade the new learning took firm root in India; and, though the Muhammadans still held aloof, the demand for English schools outstripped the means of Government for providing them.

GROWTH AND ORGANISATION OF ENGLISH EDUCATION.

An epoch in Indian educational history is marked by Sir Charles Wood's despatch in 1854. Perhaps its most notable feature was the emphasis which it laid on the importance of primary education. The old idea that the education imparted to the higher classes of society would filter down to the lower classes was discarded. The new policy was boldly "to combat the ignorance of the people which may be considered the greatest curse of the country." For this purpose Departments of Public Instructions were created on lines which do not differ very materially from the Departments of the present day. The despatch also broke away from the practice followed since 1835 whereby most of the available public funds had been expended upon a few Government schools and colleges, and instituted a policy of grants-in-aid to private institutions. "Such a system as this, placed in all its degrees under efficient inspection, beginning from the humblest elementary institution and ending with the university test of a liberal education would impart life and energy to education in India, and lead to a gradual but steady extension of its benefits to all classes of people." Another feature of the despatch was an outline of a university system which resulted in the foundation of the Universities of Calcutta, Madras and Bombay three years later. The affiliating type of university then became the pivot of the Indian education system. It has undoubtedly been of value in several ways. It enabled Government to select recruits for its service on an impartial basis; it did much, through the agency of its Colleges to develop backward places; it accelerated the conversion of Hindus to a zeal for western education; and it cost little at a time when money was scarce. On the other hand, the new universities were not corporations of scholars, but corporations of administrators; they did not deal directly with the training of men, but with the examination of candidates; they were not concerned with learning, except in so far as learning can be tested by examination. The colleges were fettered by examination requirements and by uniform courses; their teachers were denied that freedom which teachers should enjoy; and their students were encouraged not to value training for its own sake but as a means for obtaining marketable qualifications. In certain important respects the recommendations in the despatch were not followed. The Directors did not intend that university tests, as such, should become the sole tests qualifying for public posts; they also recommend the institution of civil service examinations. They did not desire the universities to be deprived of all teaching functions; they recommend the establishment of university chairs for advanced study. They were aware of the dangers of a too literary course of instruction; they hoped that the system of education would rouse the people of India to develop "the vast resources of their country.....and gradually, but certainly, confer upon them all the advantages which accompany the healthy increase of wealth and commerce. The

encouragement of the grant-in-aid system was advocated to an even greater extent by the Education Commission of 1882, which favoured the policy of withdrawing higher education from the control of Government within certain limits and of stimulating private effort. In theory the decision was correct, but in practice it was irretrievably wrong. In its fatal desire to save money, Government deliberately accepted the mistaken belief that schools and colleges could be maintained on the low fees which the Indian parent could be expected to pay. And, in the course of time, an unworkable system of dual control grew up, whereby the Universities with no funds at their disposal were entrusted with the duty of granting recognition to schools and the Departments of Public Instructions were encouraged to cast a blind eye on the private institutions and to be content with the development of a few favoured Government institutions. There can be little wonder that, under such a system of neglect and short-sightedness, evils crept in which can now only be removed by drastic changes and by lavish expenditure.

The Reforms of 1902-4.

In 1902, the Universities Commission was appointed by Lord Curzon's Government, and its investigation was followed by the Universities Act of 1904. The main object of the Act was to tighten up control, on the part of Government over the universities, and on the part of the universities over the schools and colleges. The Chancellors of the Universities were empowered to nominate 80 per cent. of the ordinary members of the Senates and to approve the election of the remainder; the Government retained the power of cancelling any appointment, and all university resolutions and proposals for the affiliation or disaffiliation of colleges were to be subject to Government sanction. The universities were given the responsibility of granting recognition to schools and of inspecting all schools and colleges, the inspection of schools being ordinarily conducted by the officers of the Department of Public Instruction. Permission was also given to the universities to undertake direct teaching functions and to make appointments, subject to Government sanction, for these objects: but their scope was in practice limited to post-graduate work and research. The territorial limits of each university were defined, so that universities were precluded from any connexion with institutions lying outside those boundaries. Neither the Commission nor the Government discussed the fundamental problems of university organisation, but dealt only with the immediate difficulties of the Indian system. They did not inquire whether the affiliating system could be replaced by any other mode of organisation, nor whether all schools might be placed under some public authority which would be representative of the universities and of the departments. They assumed the permanent validity of the existing system, in its main features, and set themselves only to improve and to strengthen it.

Recent Developments.

Since the passing of the Universities Act of 1904, there has been a considerable expansion of the educational system. The two tables given below afford useful comparisons with previous years and serve to illustrate the growth and expansion of education in India.

(a) STUDENTS.

Year.	Public Institutions.			All Institutions (Public & Private).		
	Males.	Girls.	Total.	Males.	Girls.	Total.
1886-87	*2,764,751	*206,108	2,970,859	*3,115,808	*277,736	3,343,544
1891-92	3,041,510	307,400	3,348,910	3,517,778	339,043	3,856,821
1896-97	3,428,376	360,006	3,788,382	3,954,712	402,158	4,356,870
1901-02	3,493,325	393,168	3,886,493	4,077,430	444,470	4,521,900
1906-07	4,164,832	579,648	4,744,480	4,743,604	645,028	5,388,632
1911-12	5,253,065	875,660	6,128,725	5,828,182	952,539	6,780,721
1915-16	5,871,194	1,112,024	6,983,208	6,431,215	1,186,281	7,617,496
1916-17	6,050,840	1,156,468	7,207,308	6,621,527	1,230,419	7,851,946
1917-18	6,119,423	1,192,309	7,311,742	..	..	7,948,068

* These figures do not include the girls in boys' schools, or the boys in girls' schools, as the case may be.

(b) EXPENDITURE.

Year.	Direct Expenditure.		Direct and Indirect.	
	Public Funds.	Total.	Public Funds.	Total.
	Rs.	Rs.	Rs.	Rs.
1886-87	*....	1,98,31,316	1,34,81,812	2,52,42,414
1891-92	1,07,55,368	2,40,93,149	1,56,18,184	3,05,19,632
1896-97	1,19,85,647	2,77,38,737	1,67,65,650	3,52,44,900
1901-02	1,26,28,586	3,06,37,633	1,77,03,968	4,01,21,462
1906-07	1,88,31,204	3,88,67,352	2,96,34,574	5,59,03,673
1911-12	2,57,57,212	5,39,41,277	4,05,23,072	7,85,92,605
1915-16	3,96,61,135	7,47,43,004	6,21,68,904	11,08,29,249
1916-17	4,18,12,109	7,92,86,819	6,14,80,471	11,28,83,068

* No information.

In 1917-18 the total expenditure on education amounted to Rs. 11,82,09,000, of which Rs. 6,48,02,000 came from public funds. In spite of this marked advance, there is much leeway to make up, as in the last census report the literate population of India was only 59 per thousand (males 186 and females 10 per thousand).

Primary Education.—The primary schools are mainly under the direction of the local boards and municipalities. In 1911, the late Mr. G. K. Gokhale pleaded in the Imperial Legislative Council for a modified system of compulsory primary education, but Government was unable to accept the proposal. In recent years, legislation has been approved by certain of the provincial legislative councils (notably Bombay) whereby municipalities are empowered to impose a system of compulsory primary education within their areas. In the Bombay Presidency, a few municipalities have already taken advantage of the Act, with the assistance of the Bombay Government. The same Government has agreed to contribute nine lakhs annually to the Municipality of Bombay for these purposes.

Secondary and High School Education.

—The policy of Government is to maintain a small number of high schools (roughly one for each revenue district) which are to be regarded as models for private enterprise, and to aid private institutions. In 1911-12 there were 1,219 high schools for boys in India and in 1917-18 the number had risen to 1,659, the number of scholars in the former year being 390,881, and in the latter year 563,731. Some attempts have been made to give a greater bias towards a more practical form of instruction in these schools. The Commission of 1882 suggested that there should be two sides in secondary schools, "one leading to the entrance examination of the universities, the other of a more practical character, intended to fit youths for commercial and other non-literary pursuits." Some years later, what were called B and C classes were started in some schools in Bengal, but, as they did not lead to a university course, they have not been successful. In more recent years, the Government of India has advocated the institution of a school final examination in which the more practical subjects may be included. Efforts have also been made to improve the conduct of the matriculation and to emphasise the importance of oral tests and of school records. In Madras, this examination which was placed under the direction of a Board representative of the University and of Government, has proved somewhat cumbersome and certain modifications are being made. In the United Provinces, only the better schools are privileged to prepare for the School Final Examination so that better results have been achieved. In the Punjab and in Bombay, the school leaving examination is conducted by Boards. But the main difficulty has not yet been touched. The University which recognises the schools has no money wherewith to improve them: and the Department of Public Instruction, which allots the Government grants, has no responsibility for the recognition of schools, and no connexion whatever with the private unaided schools. This dual authority and this division of responsibility

have had unhappy effects. The standard of the schools also is very low so that the matriculates are often unable to benefit by the college courses. In Mysore, the standard of the schools has been raised by withdrawing from the University the first year's classes and by placing them in a number of the better schools in the State.

There are schools for Europeans and Eurasians which are placed under the control of special inspectors for European Schools. The education of the domiciled community has proved to be a perplexing problem, and in 1912 a conference was summoned at Simla to consider the matter. The difficulty is that European Schools are very remote from the general system of education in India.

The Arts Colleges.—Affiliated to the universities are colleges which the University concerned has the power under the Act of 1904 to inspect and to regulate. In 1918, there were 126 arts colleges in British India; and there were in these 49,527 male, and 914 female, students. The increase in the number of students during the quinquennium (1912-1917) was 58.9 per cent. The universities are empowered to make regulations for the residence of students, but, owing to the limited provision of hostels, it is difficult for the colleges to comply with these regulations. With the assistance of Imperial grants many new hostels have been built in Calcutta. The main weakness of these arts colleges is that they vary much in efficiency with the result that the standard and scope of their work tends to be regulated by the weaker colleges. In many cases the pay and conditions of service of the teachers are very unsatisfactory. Each college again forms a water-tight compartment, there being very little co-operation among the colleges.

Professional and Technical Education.

—There are eight medical colleges (in addition to a number of medical schools) with 2,511 students; twenty-one law colleges with 5,479 students; a number of agricultural colleges of which two only (Poona and Lyallpur) are affiliated to a university. A research institute in agriculture, was started by Lord Curzon at Pusa in Bihar, which has done valuable work. Conferences have recently been held at Pusa, Simla and Poona, with the object of providing a suitable training in agriculture. There are training colleges for secondary teachers in various parts of India, and normal schools for the training of vernacular teachers. In 1917, the Government of India made a recurring grant of 30 lakhs for the improvement of training facilities and for increased pay to teachers. Very little has been done to provide suitable instruction in commerce. The Sydenham College of Commerce in Bombay has recently been instituted for this purpose. Industrial institutions are dotted about India, some maintained by Government others by municipalities or local boards, and others by private bodies. One of the most important is the Victoria Jubilee Technical Institute in Bombay. The tendency in recent years has been to place these institutions under the control of the Departments of Industries. In this connexion should be mentioned the Indian Institute of Science at Bangalore, the product of generous donations by

Statement of Educational Progress in MADRAS.

			1912-13.	1913-14.	1914-15	1915-16.	1916-17.	1917-18.
Area in square miles	..	{ Male .. Female ..	} No change.	No change.	{ 142,330 20,382,955 21,022,449 41,405,404	} No change.	No change.	No change.
Population	..	Total Population						
<i>Public Institutions for Males.</i>								
Number of arts colleges ..	..	..	29	34	34	37	38	38
Number of high schools ..	..	..	171	176	182	183	188	196
Number of primary schools ..	..	..	25,223	26,018	26,917	28,166	28,881	29,862
<i>Male Scholars in Public Institutions.</i>								
In arts colleges ..	..	..	5,491	7,028	8,180	8,409	7,726	8,050
In high schools ..	..	..	77,581	85,364	93,367	97,993	105,402	107,546
In primary schools ..	..	..	889,393	952,035	999,685	1,048,380	1,071,636	1,092,619
Percentage of male scholars in public institutions to male population.	..	..	4.9	5.3	5.6	5.9	6.0	6.1
<i>Public Institutions for Females.</i>								
Number of arts colleges ..	..	..	2	2	3	3	3	3
Number of high schools* ..	..	..	32	35	35	35	36	37
Number of primary schools ..	..	..	1,281	1,443	1,527	1,619	1,692	1,860
<i>Female Scholars in Public Institutions.</i>								
In arts colleges ..	..	..	56	66	104	134	184	210
In high schools* ..	..	..	4,689	5,491	5,929	6,223	6,558	6,769
In primary schools ..	..	..	223,835	248,214	265,623	280,558	293,185	309,155
Percentage of female scholars in public institutions to female population.	..	..	1.1	1.2	1.3	1.4	1.4	1.4
TOTAL SCHOLARS in public institutions { Male .. Female ..			1,011,753 234,197	1,085,348 259,706	1,140,713 277,187	1,198,328 293,617	1,229,914 3,07,125	1,256,364 323,380
Total ..			1,245,950	1,345,554	1,417,840	1,491,945	1,557,039	1,579,744
TOTAL SCHOLARS (both male and female) in all institutions.			1,362,182	1,439,945	1,542,955	1,615,159	1,661,012	1,696,539
<i>Expenditure (in thousands of rupees).</i>								
From provincial revenues ..	..	..	58,20	65,69	66,71	68,55	76,93	96,11
From local funds ..	..	..	17,27	(a) 23,94	29,20	30,30	29,03	16,44
From municipal funds ..	..	..	4.15	(b) 5.63	8.50	8.64	4.76	4.06
Total Expenditure from public funds ..	..	..	79,62	95,26	1,04,41	1,07,49	1,12,75	1,16,61
From fees ..	..	..	41,44	46,06	50,91	54,70	58,29	59,57
From other sources ..	..	..	36,56	38,67	38,21	44,33	45,84	50,27
GRAND TOTAL OF EXPENDITURE ..	..	..	1,57,62	1,79,99	1,93,53	2,06,52	2,16,88	2,26,45

* Include also vernacular high schools for girls.

(a) Includes provincial contribution of Rs. 13,07,994.

(b) Includes provincial contribution of Rs. 1,62,669.

the Tata family. In addition to a number of engineering schools, there are engineering colleges at Roorkee, Sibpur, Poona and Madras, each of which is affiliated to a university. There are schools of art in the larger towns, where not only architecture and the fine arts are studied, but also practical crafts like pottery and iron-

work. There is also a school of forestry at Dehra Dun. Many inquiries have been made in the matter of technical education, by Colonel Atkinson, and Mr. Dawson, by the Public Works Committee and by the Industrial Commission, but as yet little progress has been made.

Universities.

Constitution.—There are eight Universities in India with the following territorial limits.—

University.	Territorial Limits.	
	Provinces (including any Native States under their political control and any foreign possession included within their boundaries).	Native States or British Colony.
Calcutta	Bengal, Burma and Assam ..	.....
Madras	Madras and Coorg	Hyderabad and Ceylon.
Bombay	Bombay and Sind	Baroda.
Allahabad	United Provinces of Agra and Oudh, the Central Provinces (including Berar) and Ajmer-Merwara.	The States included in the Rajputana and Central India Agencies.
Punjab	Punjab, North-West Frontier Province, British Baluchistan and Delhi.	Kashmir and Baluchistan,
Mysore .. .. .	.....	Mysore.
Patna	Bihar and Orissa .. ..	.....

The Governor General is the Chancellor of the University of Calcutta, and the head of the provincial government is the Chancellor of each of the other universities. The Vice-Chancellor is nominated by the Government concerned. The executive body is the Syndicate which is now organised so as to include a larger educational element. Over this body the Vice-Chancellor presides, all other members being elected by the Faculties, except the Director of Public Instruction who is a member *ex-officio*. The secretarial work is under the direction of the Registrar. The legislative body is the Senate which consists of from 75 to 100 members, 80 per cent. of whom are nominated by the Chancellor, the rest being elected by the Senate, or by its Faculties, or by the body of registered graduates. The Senate is divided into Faculties, which are in most cases those of arts, science, law, medicine, and engineering. There is an oriental faculty in the Punjab University alone. There are also Boards of Studies, whose duties are to recommend text-books or books which represent the standard of knowledge required in the various examinations.

Apart from the general tightening up of university control over its colleges, the chief fea-

ture of university development since the passing of the Act of 1904 has been the participation, by the universities in post-graduate teaching and research. In Madras and Allahabad a small number of university professors have been appointed; in the Punjab the services of a certain number of temporary professors from overseas have been engaged during the cold weather. In Bombay a certain number of college professors and others have delivered lectures to post-graduate students under the auspices of the University. But the most notable advance has been made in Calcutta, owing to the energy of Sir Asutosh Mookerjee and to the liberality of Sir Tarak Nath Palit and of Sir Rash Behari Gosh. In 1916, a committee was appointed to investigate the matter. In accordance with its report, new regulations have been passed by the Senate, whereby all post-graduate teaching and research in arts and science in Calcutta is now conducted directly by the University, though many of the college teachers have been invited to take part in the work. Post-graduate councils in arts and science have also been constituted, which comprise all the teachers engaged in the work and a very small number of additional numbers appointed by the Senate.

Statement of Educational Progress in BOMBAY.

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles .. .. .	..	No change.	{ 123,070 10,252,255 9,430,994 19,683,249 }	No change.	123,065	No change.
Population	{ No change. .. } Total Population .. .. .	..	..	..	..	..
Public Institutions for Males.	..	..	..	..	..	..
Number of arts colleges	11	10	7	7	8	9
Number of high schools	138	141	110	111	122	126
Number of primary schools	12,169	12,790	9,929	9,797	9,645	9,951
Male Scholars in Public Institutions.	..	..	..	..	..	..
In arts colleges	3,850	4,604	3,381	4,596	4,763	4,630
In high schools	45,385	47,327	37,600	37,615	40,154	41,884
In primary schools	678,031	701,496	551,987	535,461	528,294	522,962
Percentage of male scholars in public institutions to male population.	5.4	5.6	6.0	6.0	5.9	5.9
Public Institutions for Females.	..	..	..	..	..	..
Number of arts colleges	30	32	31	31	32	35
Number of high schools	1,199	1,271	1,057	1,093	1,110	1,191
Female Scholars in Public Institutions.	..	..	..	..	..	..
In arts colleges	91	93	94	106	125	128
In high schools	4,095	4,451	4,485	4,600	4,826	5,347
In primary schools	136,378	146,210	119,999	124,680	124,324	127,868
Percentage of female scholars in public institutions to female population.	1.1	1.2	1.3	1.4	1.4	1.5
TOTAL SCHOLARS in public institutions { Male { Female ..	761,435	790,303	620,864	619,789	604,701	602,405
.. { Female ..	145,392	156,019	129,738	131,833	134,684	138,899
Total ..	906,827	946,322	750,602	754,622	739,385	741,304
TOTAL SCHOLARS (both male and female) in all institutions.	987,685	1,029,017	789,709	799,273	780,504	781,674
Expenditure (in thousands of rupees).	..	..	..	..	..	..
From provincial revenues	68.82	70.54	82.08	4.77	75.51	* 79.19
From local funds	11.62	9.63	9.34	2.17	8.87	8.52
From municipal funds	9.85	10.43	11.15	12.34	13.49	14.62
Total Expenditure from public funds	90.29	90.60	102.57	99.28	97.87	102.33
From fees	26.36	29.51	27.25	29.21	33.54	35.89
From other sources	36.83	39.42	21.05	25.62	24.48	26.15
GRAND TOTAL OF EXPENDITURE	1,53.48	1,59.53	1,53.87	1,54.11	1,55.89	1,64.37

Patna University.—Much thought has also been given to the evolution of a new type of university which will run abreast of the old. Patna University, which was constituted in 1917, is in most of its features a university of the old type, but certain innovations have been made. The Chancellor, who is the Lieutenant Governor of the province, may annul any proceeding of the University which is not in conformity with the Act and the Regulations. In the Senate the application of the elective principle has been extended, by increasing both the proportion of the elected Fellows and the categories of electing bodies; and the Senate includes representatives of the teaching staff and of the graduate teachers of recognised schools. Further, all colleges are given statutory representation on the Senate in the persons of their principals. The Syndicate is the ultimate authority in academic matters, subject to the proviso that any six of its members have the power to refer such matters to the Senate for review. The Vice-Chancellor is a paid officer and is appointed by the local Government. In addition to other duties, he has the power to inspect all colleges of the University. The colleges affiliated to the University are of two kinds; colleges of the University, whose buildings are situated within a specified area, and external colleges, whose buildings are situated in one of the four following towns: Muzaffarpur, Bhagalpur, Cuttack and Hazaribagh.

Mysore University.—Was constituted under Regulation V of 1916, for the better encouragement and organisation of education in the State. His Highness the Maharaja is the Chancellor. The University is very similar in its constitution to the older Indian universities, having a Senate of not less than fifty and not more than sixty members; but, unlike the older Universities, it gives seats on the Senate to the university professors *ex-officio*. It departs from existing practice by centralising university instruction in Mysore and Bangalore, and by conducting the work of the first year of the old colleges course in a few specially selected high schools.

Hindu University, Benares.—The creation of the Hindu University, Benares, forms a landmark in the history of the Indian university system. The university is not designed to meet the needs of one province alone but to draw students from all parts of India. The Chancellor (H. H. the Maharaja of Mysore) and the Vice-Chancellor (Sir P. S. Sivaswamy Aiyar) come from South India; and its teachers and students are by no means confined to the citizens of the United Provinces.

It has no monopoly, no privilege. Its energies are not diffused by the necessity of supervising distant colleges nor is its vitality impaired by the embarrassment of administrative duties other than those of organising its own teaching. It is therefore the first Indian university which is primarily a seat of learning and not an administrative organisation. Its constitution is therefore very different from those of the other Indian universities. A dividing line is made between administrative matters, entrusted to a large body called the Court, with an executive committee called the Council, and academic matters, entrusted primarily to a Senate, with

an executive body called the Syndicate. The Court which is the supreme governing body besides its administrative powers, has the right to review the acts of the Senate, except where the Senate has acted in accordance with the Act, statutes and regulations. The Senate has the entire charge of the organisation of instruction in the University and the colleges, the courses of study, and the examination and discipline of students, and the conferment of ordinary and honorary degrees.

The proposed University of Dacca.—With the modification of the Partition of Bengal in 1911, Dacca ceased to be the capital of the Separate province of Eastern Bengal and Assam. Shortly afterwards, the Government of India conveyed their decision to establish a university of Dacca in their letter to the Government of Bengal, dated the 4th April 1912, and the latter Government appointed a committee to frame a scheme for the new University. The committee was instructed that the University should be of the teaching and residential and not of the federal type, and that it should be a self-contained organism unconnected with any colleges outside the limits of the city of Dacca. The Committee, which was presided over by Mr. R. Natham, presented its report later in the year. The report is of great value and in it certain new principles are enunciated. Great emphasis was attached to physical training and education and also to the tutorial guidance of the students. The University was to be very largely a State institution, and practically all its teachers and those of its colleges were to be Government servants. Though the colleges were to be separate units, each with its separate staff and buildings, they were to be linked together and with the University by a close form of co-operation. The executive body, to be called the Council, was to have very considerable powers, subject to the sanction of Government. The Council, which was to be a large and representative body, was to be the legislative authority, subject to the control of Government, and in other respects an advisory authority. The total cost of the full scheme was estimated at 53 lakhs, but deducting certain sums which were available from other sources the net cost was put down at nearly 40 lakhs, exclusive of recurring charges. These were expected to involve a net total of about 6½ lakhs annually. Before the scheme thus elaborated (which had received the Secretary of State's sanction) could be taken in hand, the war broke out. A Bill constituting the University is now under consideration.

The proposed Muhammadan University.—It was the aim of Sir Syed Ahmed Khan years ago to place the benefits of a liberal education within the reach of the Muhammadan community; and in 1875 a school was opened which three years later was converted into the Aligarh College. The movement in favour of transforming this college into a teaching and residential university started as early as the end of last century. In 1911, during the visit of His Majesty the King Emperor to India, His Highness the Aga Khan made an appeal which resulted in the collection of some thirty lakhs of rupees. A draft constitution was drawn up and a consultative committee was formed.

But the draft constitution was not approved by the Secretary of State, and on the question of the right of affiliating colleges outside Aligarh in particular, there was a sharp difference of opinion. Government laid down, as in the case of the proposed Hindu University, that the new university should not have the power of affiliating Moslem institutions in other parts of India.

On October 15th, 1915, a meeting of the Moslem University association was held at Aligarh, under the presidency of the Raja of Mahmudabad, when it was proposed that the meeting recommends the Moslem University Foundation Committee the acceptance of the Moslem University on the lines of the Hindu University. It was evident at the meeting that a large number of Indian Moslems are not prepared to accept a constitution for their university similar to that of the Hindu University.

Alteration of Plans.—In April, 1917, at a meeting of the Foundation Committee the following resolution was passed:—

“That this meeting of the Moslem University Foundation Committee hereby resolves with reference to the letter of the Government of India, Education Department, dated Delhi 17th February 1917, D. O. No. 66, that the Committee is prepared to accept the best University on the lines of the Hindu University. It further authorises the Regulation Committee appointed at its Lucknow meeting, with the President and Honorary Secretary of the Moslem University Association as its ex-officio members, to take necessary steps in consultation with the Hon. the Education Member for the introduction of the Moslem University Bill in the Imperial Legislative Council.”

The proposed Universities of Rangoon and Nagpur.—Plans for a university in Burma have been under consideration for some years. After his arrival in Burma as Lieutenant Governor, Sir Harcourt Butler thought that, on general grounds and with some reference to the needs of the province, the Rangoon University might usefully be of a more practical type than any yet attempted in India with courses in arts and science, pure and applied, technology, medicine, engineering, agriculture, law forestry, veterinary, science and training, commerce and architecture. It might perhaps combine with university instruction practical studies at the Chief Court, the Pasteur Institute and the hospitals; and also at the Museum which the local Government was committed to build as soon as funds were available. It is possible in Burma to a greater extent than in any of the older and more advanced provinces in India to concentrate the intellectual energies of the province in one immediate neighbourhood and to develop a really many-sided university. A committee is now engaged in making plans in accordance with these suggestions. The Government of the Central Provinces has also appointed a committee to report on the constitution of a university of Nagpur. The report is still under consideration.

Education of Women and Girls.—Hitherto little attention has been paid to this important branch of education, as in many

places social restrictions are still strong. In Madras and Calcutta there are two colleges each for girls: and there are in India a number of schools for girls maintained by Government or by private agency. In 1918, there were only 914 female students in arts colleges and 27,222 in high schools. Arts colleges, medical colleges, and the like admit students of both sexes, and a few girls attend them. The Lady Hardinge Medical College for Women at Delhi, which has just been started, gives a full medical course for medical students.

Administration.—The educational services are divided into (a) the Indian Educational Service, (b) the Provincial Educational Service, (c) the Subordinate Educational Service.

(a) **The Indian Educational Service.**—Comprises officers in three branches, inspectors principals and professors of colleges, headmasters of high schools, all of whom are appointed by the Secretary of State. All, with a few exceptions, start at the pay of Rs. 500 *per mensem*, with an annual increment of Rs. 50 *per mensem*, and go up to Rs. 1,000 *per mensem*, directors of public instruction receiving from Rs. 1,500 to Rs. 2,500 according to the province in which they serve. A small number of personal allowances was arranged in 1896, when the service was reorganised and received its title. There is no short service pension, but officers of 30 years' service or of 55 years of age or over receive a pension of about £400 a year.

(b) **The Provincial Educational Service.**—In this service also are found principals and professors of colleges, headmasters and inspectors of schools. This service is composed of Indians and is recruited in India, the pay scheme being on a much lower scale than that of the Indian service. The maximum pay is Rs. 700 and the minimum Rs. 200.

(c) **The Subordinate Educational Service.**—In this service are found a few headmasters, college professors, assistant inspectors and assistant masters in schools. In Bengal a number of poorly paid teachers have been converted into a lower subordinate service. The pay and prospects of this service are very poor.

The service system and the pay and prospects of the educational services have been subjected to much criticism in recent years, and were considered by the Public Services Commission. The disparity in pay and prospects between the Indian and Provincial Services has, somewhat naturally, evoked considerable discontent among the members of the Provincial Service. The pay and prospects of all three services are very inadequate.

In 1910 a **Department of Education** was established in the Government of India with an office of its own and a Member to represent it in the Executive Council. The first Member was Sir Harcourt Butler: and the present Member is Khan Bahadur Mian Muhammad Shafi. Owing to the importance of the work carried on in this Department, there are Assistants instead of Under Secretaries. At the same time a Bureau of Education was established and placed under the charge of an officer styled the Educational Commissioner (Mr. H. Sharp.) The Educational Commissioner is not an executive officer of the Department. But he is kept in touch with all

Statement of Educational Progress in BIHAR and ORISSA.

	1913-14.	1914-15.	1915-16.	1916-17.	1917-18
Area in square miles					88,282
Population.. { Male	No change.	83,233	No change.	No change.	No change.
{ Female		16,859,929			
TOTAL POPULATION ..		17,630,155			
		34,490,084			
<i>Public Institutions for Males.</i>					
Number of arts colleges ..	7	7	7	7	7
Number of high schools ..	91	91	94	100	106
Number of primary schools ..	22,509	21,339	21,233	22,164	23,268
<i>Male Scholars in Public Institutions.</i>					
In arts colleges	2,062	2,227	2,415	2,575	2,811
In high schools	28,712	30,887	32,391	34,733	35,200
In primary schools	597,962	557,041	547,721	574,520	606,421
Percentage of male scholars in public institutions to male population	3.9	4.0	4.0	4.0	4.1
<i>Public Institutions for Females.</i>					
Number of arts colleges ..	.... 3	.... 3	.. 3	.... 3	.... 3
Number of high schools ..	1,845	2,069	2,169	2,249	2,559
<i>Female Scholars in Public Institutions.</i>					
In arts colleges .. ..	.... 317	.... 337	.. 326	.... 330	.... 343
In high schools	91,567	93,385	95,396	97,813	105,294
In primary schools					
Percentage of female scholars in public institutions to female population .. ..	.55	.63	.65	.62	.62
TOTAL SCHOLARS in { Male ..	712,503	678,715	674,490	688,190	696,510
public institutions { Female ..	105,479	111,714	114,674	109,281	108,702
TOTAL ..	817,982	790,429	789,164	797,471	805,212
TOTAL SCHOLARS (both male and female) in all institutions...	861,535	836,209	831,430	845,025	852,324
<i>Expenditure (in thousands of rupees).</i>					
From provincial revenues ..	33,71	36,72	31,41	29,58	28,81
From local funds	11,29	14,13	15,57	15,73	15,49
From municipal funds	91	1,08	1,28	1,73	1,46
TOTAL Expenditure from public funds	45,91	51,93	48,26	47,04	45,76
From fees	20,60	21,12	22,67	22,37	23,04
From other sources	13,41	12,74	13,63	12,11	12,10
GRAND TOTAL OF EXPENDITURE	79,92	85,79	84,56	81,52	80,90

Note:—The year 1912-13 is the first year of the newly constituted province of Bihar and Orissa.

its proceedings; he gives advice : and he collects and correlates information in regard to the progress of education in India and elsewhere.

Calcutta University Commission.—In 1917, a Commission was appointed to inquire into the conditions and prospects of the University of Calcutta and to consider the question of a constructive policy in relation to the questions which it presents. The President of the Commission was Dr. M. E. Sadler, Vice-Chancellor of the University of Leeds. The other members were Sir Asutosh Mookerjee of the Calcutta High Court; Mr. P. J. Hartog, Academic Registrar of the University of London; Mr. W. W. Hornell, Director of Public Instruction, Bengal; Dr. J. W. Gregory, Professor of Geology, Glasgow University; Mr. Ramsay Muir, Professor of History, Manchester University; and Dr. Zia-ud-din Ahmad of the M. A. O. College, Aligarh. Mr. G. Anderson, Assistant Secretary to the Government of India, was the Secretary. The Commission sat for 17 months and made an exhaustive inquiry; and their report was published in 1919. The Commissioners recommended drastic changes in the educational system, both in its organisation and in its methods of teaching. They were convinced that the reform of university and secondary education is a matter which does not safely admit of delay.

High School and Intermediate Education.—The Commission found that the deficiencies of the school system arise, in the main, from the following causes. (a) Most of the schools are under-equipped and are conducted by an underpaid and for the most part an untrained staff. (b) They are unduly dominated by the matriculation examination which is itself ill-designed and not of a sufficiently high standard. (c) Owing to the division of authority between the University and the Department of Public Instruction there is an inadequate machinery for supervising, guiding and assisting the work of the schools as a whole; in other words, a coherent system of education does not yet exist. (d) A large and vitally important part of secondary instruction is actually conducted, not by the schools but by the colleges of the University in their intermediate classes; and, because it is so conducted it largely fails of its purpose, partly because the methods chiefly employed (those of the mass lecture) are unsuitable for work at this stage, and partly because many subjects and lines of study, especially those which have a vocational bearing, are almost wholly disregarded. The Commission therefore recommended that the stage of admission to the University should be (approximately) that of the present intermediate; and that the duty of providing training at the intermediate stage should be transferred from the universities to new institutions to be known as 'Intermediate Colleges' some of which should be attached to high schools, while others might be organised as separate institutions. There should be at least one such institution in each revenue district; and the Courses should make provision for the medical, engineering and teaching professions and for careers in agriculture, commerce and industry. As the Department of Public Instruction is unable to supervise the new system, more than half the schools being outside its jurisdiction, and as

the University cannot be so organised as to be able to deal effectively with them, the Commission recommended the constitution of a Board of Secondary and Intermediate Education, consisting of university and Government representatives and including persons conversant with industry, commerce, agriculture and medicine. The Board should be empowered to define the curricula, to conduct the examinations, to grant recognition, to advise Government in the matter of grants, and to exercise control over institutions maintained out of public funds.

New Universities.—The Commission found that the numbers of students in Bengal were too great to be efficiently dealt with by a single university organisation. The undergraduate courses in arts and science are given by colleges almost entirely self-contained, in many cases widely scattered, meagrely staffed and often dependent solely on fees. The courses are too predominantly literary and too little varied to suit various needs. The teachers are usually underpaid, and have no legal security of tenure and next to no freedom in their work. The cleavage between post-graduate and undergraduate work has led to the impoverishment of undergraduate work. The resources of the mufassal colleges are insufficient to give university training; and these colleges have too slender a connexion with the University. The Commission felt that, in view of the large numbers of students and in view of the traditions of some of the colleges which should not be lightly swept aside, the University of Calcutta should not be reconstituted on a unitary basis. They therefore recommended a programme of reconstruction under which the colleges should abandon the idea of being self-contained and self-sufficient institutions and should be prepared to co-operate with one another and with the University; that the University should have effectual means to exercise a due control over the colleges by the regulations for admitting them to constituent rank, by granting recognition to their teachers, by appointing college and other teacher for giving instruction open to all students of the University, and by advising Government in regard to the grants to be made to colleges. The Commission, however, recommended that the University of Dacca should be established as a unitary, teaching university wherein all formal instruction given in the name of the University should be given by officers of the University and under the direct control of the University authorities, no collegiate organisation being interposed between these authorities and the students. The Commission also proposed that some special form of treatment was necessary for the mufassal colleges. The best solution would be that by a judicious concentration of resources a few of these colleges should be encouraged and helped gradually to develop into more highly organised and semi-independent institutions, and ultimately into distinct universities; while others would become intermediate colleges. This change, however, should not be unduly forced, especially in Bengal, where the mufassal centres are comparatively weak and where communications, except to Calcutta, are difficult. A mufassal boards under which certain mufassal centres would

	1917-18.	1916-17.	1915-16.	1914-15.	1913-14.	1912-13.
Area in square miles	No change.	No change.	No change.	{ 106,402 24,469,373 22,365,735 46,835,108	No change.	{ No change.
Population { Male Female	No change. 15 151 10,862	No change. 15 143 10,540	No change. 35 132 10,476	{ 36 126 10,543	No change. 35 123 10,444	{ No change. 32 117 10,158
Total Population						
<i>Public Institutions for Males.</i>						
Number of arts colleges	5,379	5,130	6,195	25,784	5,286	4,869
Number of high schools	46,374	44,976	41,243	39,558	38,232	35,804
Number of primary schools	650,829	633,869	579,658	564,200	554,667	537,351
Male Scholars in Public Institutions.	31	30	28	28	27	26
In arts colleges						
In high schools						
In primary schools						
Percentage of male scholars in public institutions to male population.						
<i>Public Institutions for Females.</i>						
Number of arts colleges	4	4	4	4	5	5
Number of high schools	25	23	22	21	22	21
Number of primary schools	1,120	1,089	1,064	1,084	1,067	1,008
Female Scholars in Public Institutions.						
In arts colleges	55	52	70	66	60	55
In high schools	2,716	2,340	2,227	2,080	2,187	1,984
In primary schools	56,720	51,944	48,884	47,916	46,693	42,943
Percentage of female scholars in public institutions to female population.	30	28	27	25	24	22
TOTAL SCHOLARS in public institutions. { Male { Female.	764,391 67,542 831,933	742,134 67,542 805,420	694,986 58,902 753,883	683,121 57,552 740,673	668,707 55,526 724,233	643,900 50,269 694,169
Total	918,258	894,886	841,324	832,454	819,472	788,298
TOTAL SCHOLARS (both male and female) in all institutions.						
<i>Expenditure (in thousands of rupees).</i>						
From provincial revenues	56.52	47.96	46.61	54.60	46.74	48.04
From local funds	32.08	38.60	37.14	32.34	30.25	28.57
From municipal funds	5.24	5.47	4.60	5.05	4.95	3.72
Total Expenditure from public funds	93.84	92.03	88.35	91.99	81.94	78.33
From fees	34.40	31.14	28.86	27.50	25.07	23.22
From other sources	24.65	24.29	21.98	22.07	21.29	19.55
GRAND TOTAL OF EXPENDITURE	1,52.89	1,47.46	1,39.19	1,41.56	1,28.80	1,21.20

be given an increasing measure of freedom and independence should therefore be constituted in connexion with the University of Calcutta.

University Organisation.—The Commission found that the governance and administration of the University were unsatisfactory and ineffective as an instrument for the encouragement of learning. The Senate has to serve as a representative assembly and at the same time to decide matters of detail appropriate to a small executive. It is neither large enough to reflect all the shades of relevant experience and opinion, nor small enough for the discussion of intricate affairs. The Syndicate is at once insufficiently representative and too accidental in its composition to decide all the problems which the insufficiently differentiated constitution of the University assigns to its care. The relations between the University and its colleges are such that, while there is no really effective means of securing the efficiency of the colleges, yet they are under an unduly rigid control which restricts their freedom of action and makes it difficult for them to show any independent initiative. The University is also loaded with administrative functions, particularly in regard to the recognition of schools which it cannot adequately perform, and which bring it into difficult relations with the educational organisation of the State. The Commission recommended (a) the constitution of a large and representative Court, including ex-officio, elected and nominated members; the Court should have the power to make Statutes, to approve the financial policy of the University, and generally to review its work, and, since so large a body could not meet frequently, it should elect a Committee of Reference to represent it in dealing with the executive Council; (b) a small Executive Council, with substantial powers of control over finance and the general policy of the University and to make Ordinances; (c) an Academic Council including the principal teachers of the University, and having large independent powers in all purely academic questions affecting courses of study, examinations and degrees; and (b) Faculties, Boards of Studies and other statutory boards. In order to give flexibility to the new system, the Commission proposed that the regulations governing the work of the Universities should be less rigid, and should be classified in accordance with the character of the subject matter. The classification should be as follows:—(a) The Act, made and alterable only by the Imperial Legislative Council; (b) the Statutes, made in the first instance by the Imperial Legislative Council, but subsequently capable of being altered or added to by the Court of the University, subject to the approval of Government; (c) the Ordinances, made by the Executive Council of the University subject to ratification by the Court, the Chancellor having the right of veto; (d) the Regulations, made by appropriate bodies in the University to which such powers are entrusted by Statute and Ordinance.

The Position of Government.—The Commission have made drastic recommendations in regard to the position of Government in the matter of education. They urge that the relations between Government and the universities are of an unsatisfactory kind, involving far too much detailed Government intervention

which cannot be satisfactorily exercised and which undermines the sense of responsibility of the university authorities. They also feel that the constitution of State Universities such as that proposed for Dacca by the Dacca Committee, would not be a wise step. The universities therefore should be, in many respects, autonomous bodies though considerable powers, especially in the constitution of selection committees for making university appointments, should be vested in the Chancellor, who should also have the right to nominate a certain number of persons to all the important university authorities. The Government should have the right to sanction or to refuse any change in, or addition to the Statutes of the University; and should be able to exercise much influence, through the giving of grants.

The Commission also held the opinion that the resources of the Government Colleges should be so far as possible available to the University as a whole. In order that these colleges should play their part in the new system and in order that this aspect of the financial responsibility of Government for university education might be clearly defined, these colleges should normally be placed near the direction of governing bodies appointed by Government.

The Commission also discussed the vexed question of Government service and contended that the advantages are more than outweighed by the disadvantages. The system is marked by undue rigidity; the distinctions between its grades arouse irritation; it gives rise to administrative inconveniences; it tends to officialise education and to centralise its organisation; and it embarrasses the privately managed institutions, because their field of choice is restricted by so large a proportion of qualified teachers being confined to schools under Government management. The Commission held that the organisation of the university branch of the educational services should be considered in connexion with a scheme of university reform. The time is at hand when the service system should be abandoned. In the new universities, therefore, appointments should be made by the university authorities. At the same time there should be safeguards against abuse (a) by providing for a special form of selection committee; (b) by providing that in the case of certain listed posts which it is desirable to fill with western-trained men of distinction, nominations should be made by special selection committees in England; and (c) by the recommendation that Government should guarantee the salary and pensions or superannuation allowances attached to these posts. In regard to the secondary and higher secondary branches of education the ultimate establishment of a professional organisation of the main teaching body should be aimed at from the outset; teachers being free to transfer their services from private to Government schools or *vice versa*, and being all participants in a general system of superannuation, managed by the Board of Secondary and Intermediate Education. In view of the need of western-trained teachers in these grades of education, a special corps of teachers and inspectors should be recruited and paid by Government (through the Board) and should enjoy full security and

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles	No change.	No change.	{ 96,685 10,770,707 8,807,252 19,577,959	99,251 10,770,705 8,807,254 19,577,959	99,251 10,769,704 8,806,943 19,576,647	No change.
Population { Male Female	9 102 3,689	9 111 4,158	9 125 4,552	9 130 4,757	10 136 4,918	11 143 5,084
Total Population	9	9	9	9	10	11
Public Institutions for males.						
Number of arts colleges	102	111	125	130	136	143
Number of high schools *	3,689	4,158	4,552	4,757	4,918	5,084
Number of primary schools						
Male Scholars in Public Institutions.						
In arts colleges	2,770	3,163	3,496	3,873	4,214	4,593
In high schools *	46,999	47,946	50,521	51,261	54,268	55,379
In primary schools	197,230	219,796	227,890	234,132	244,796	242,335
Percentage of male scholars in public institutions to male population.	2.7	2.9	3.1	3.2	3.4	3.4
Public Institutions for Females.						
Number of arts colleges .. .. .	....	1	1	1	1	1
Number of high schools	15	16	17	18	17	18
Number of primary schools	709	793	878	922	935	954
Female Scholars in Public Institutions.						
In arts colleges	3	13	18	20	22	28
In high schools	1,526	1,721	241	2,453	2,449	2,586
In primary schools	32,118	37,199	38,757	41,166	43,055	43,254
Percentage of female scholars in public institutions to female population.	4.4	5.1	5.4	5.9	6.2	6.2
TOTAL SCHOLARS in public institutions { Male Female.	298,014 39,838	326,182 45,631	338,917 47,832	350,675 52,278	366,142 54,901	364,516 55,528
Total	337,852	371,813	386,749	402,953	421,043	420,044
TOTAL SCHOLARS (both male and female) in all institutions.	410,491	439,956	445,909	463,157	476,738	468,839
Expenditure (in thousands of rupees).						
From provincial revenues	29,79	28,24	34,17	35,03	31,09	35,13
From local funds	16,17	21,96	24,39	27,87	25,40	12,54
From Municipal Funds	3,96	4,57	5,26	6,00	6,43	4,08
Total Expenditure from public funds	49,92	54,77	63,82	68,90	62,92	66,75
From fees	20,67	22,22	23,82	27,36	27,36	29,51
From other sources	13,61	† 16,23	19,55	17,88	18,35	18,47
GRAND TOTAL OF EXPENDITURE ..	84,20	93,22	1,07,19	1,12,17	1,08,63	1,14,73

* Includes also vernacular high schools.

† Include an Imperial contribution of Rs. 2,83,742.

pension rights. This corps may be regarded as a modified service, but with two differences: there should be no fixed or invariable hierarchy of grades; and the work of the persons so employed would not be confined to Government institutions.

Professional and Technical Education.

—The Commission found that in all these fields save law, and to a less degree, medicine, the provision now made is quite inadequate to the needs of a modern and progressive community. They urged that courses suited for the medical, engineering and teaching professions and for careers in agriculture, commerce and industry should be taught in the intermediate colleges. This should be a great advance on the present system. For the training of teachers, there should be a department of education in each university; and, in addition to the B.T. degree, education should be included as a subject (a) in one of the courses of study at intermediate colleges, and (b) in some of the groups approved for the B.A. and M.A. courses. Departments of engineering, agriculture, industries and of commerce should be instituted

in suitable places but in all these departments it is training which is most needed. As training is costly and demands elaborate equipment in nearly all vocational subjects, no course of study should be defined until there is a responsible assurance that the necessary provision of teaching and equipment is forthcoming.

The Education of Women and Girls—

should be dealt with by bodies especially conversant with the needs of the interests involved. The Commission therefore recommend a standing committee of the Board of Secondary and Intermediate Education to deal with the education of girls, and a similar body in connexion with each university.

It is clear from this summary that the Commission have enunciated a bold policy of progress, and one which should fit India to meet the growing political and industrial demands upon her. Much money will be required to put their recommendations into effect; and, though it is hoped that Government will be liberal in the aid, Government grants should be supplemented by private benefactions.

Unspent Balance.

[†]Includes a refund of .10 lakhs.

Statement of Educational Progress in BURMA.

		1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles	..	No change.	No change.	No change.	No change.	No change.	No change.
	..						
Population	{ Male ..	}	No change.	No change.	No change.	No change.	No change.
	..						
Total Population							
Public Institutions for Males.							
Number of arts colleges	..	2	2	2	2	2	2
Number of high schools*	..	39	47	56	65	68	76
Number of primary schools	..	4,733	5,046	6,029	6,492	6,788	6,681
Male Scholars in Public Institutions.							
In arts colleges	..	336	446	565	633	645	658
In high schools*	..	10,888	14,244	15,923	17,265	17,688	18,988
In primary schools	..	126,877	143,422	161,921	167,563	172,547	166,819
Percentage of male scholars in public institutions to male population.	..	3.2	3.6	4.1	4.2	4.4	4.3
Public Institutions for Females.							
Number of arts colleges	..	..	..	..	..	..	..
Number of high schools	..	13	14	14	14	15	18
Number of primary schools	..	588	599	740	855	937	933
Female Scholars in Public Institutions.							
In arts colleges	..	8	7	9	13	18	27
In high schools	..	2,440	2,811	2,918	3,257	3,633	4,238
In primary schools	..	57,479	70,324	77,273	79,767	84,182	81,050
Percentage of female scholars in public institutions to female population.	..	1.4	1.6	1.8	1.9	2.0	2.0
TOTAL SCHOLARS in public institutions.		202,108	227,035	252,623	263,704	273,192	266,699
{ Male ..							
{ Female		80,325	97,050	108,531	113,801	120,207	116,613
Total ..		282,433	324,085	361,154	377,000	393,399	383,312
TOTAL SCHOLARS (both male and female) in all institutions.		459,593	504,928	550,500	563,154	592,523	584,298
From provincial revenues		22,31	25,72	29,70	27,05	27,68	39,60
From local funds		4,44	(a) 5,67	6,92	6,40	6,17	7,00
From municipal funds		3,88	(b) 4,47	4,67	4,78	4,50	5,65
Total Expenditure from public funds		30,63	35,86	41,29	38,23	38,35	49,25
From fees		18,53	18,49	19,80	20,32	21,00	21,23
From other sources		6,20	7,20	8,26	6,59	7,44	7,02
GRAND TOTAL OF EXPENDITURE		53,36	61,55	69,35	65,14	66,79	77,50

* Include also vernacular high schools.

(a) Includes Rs. 72,817 being provincial contribution to District Cess Fund.

(b) Includes Rs. 57,772 being provincial contribution to Municipalities.

Statement of Educational Progress in ASSAM.

	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles		53,015			
Population .. { Male { Female	{ No change. }	{ 3,467,621 3,249,014 }	No change.	No change.	No change.
TOTAL POPULATION ..		6,713,635			
<i>Public Institutions for Males.</i>					
Number of arts colleges ..	2	2	2	2	2
Number of high schools ..	29	30	32	36	36
Number of primary schools ..	3,760	3,926	3,859	3,868	3,881
<i>Male Scholars in Public Institutions.</i>					
in arts colleges	441	550	592	687	810
in high schools	11,186	12,223	12,182	13,542	13,559
in primary schools	150,584	162,291	161,612	157,046	153,853
Percentage of male scholars in public institutions to male population	5.1	5.7	5.7	5.7	5.6
<i>Public Institutions for Females.</i>					
Number of arts colleges ..	.... 2	.... 2	.. 2	.... 2	.... 2
Number of high schools ..	300	345	333	329	331
<i>Female Scholars in Public Institutions.</i>					
in arts colleges	1	1	1	1	1
in high schools	411	434	418	428	386
in primary schools	20,932	24,587	24,730	24,762	23,868
Percentage of female scholars in public institutions to female population .. ..	.66	.82	.84	.85	.82
TOTAL SCHOLARS in public institutions { Male .. { Female ..	185,386 22,747	199,891 26,761	199,524 27,321	197,096 27,723	194,548 26,921
TOTAL ..	208,133	226,652	226,845	224,819	221,469
TOTAL SCHOLARS (both male and female) in all institutions.	215,141	233,883	237,485	233,013	230,085
<i>Expenditure (in thousands of rupees).</i>					
From provincial revenues ..	10.76	12.33	12.28	9.97	13.82
From local funds	6.25	7.81	7.26	7.33	3.96
From municipal funds	33	44	43	3	24
TOTAL Expenditure from public funds	17.34	20.58	19.97	17.63	18.02
From fees	3.50	3.75	4.39	4.65	5.24
From other sources	2.44	2.21	2.52	3.31	2.56
GRAND TOTAL OF EXPENDITURE	23.28	26.54	26.88	25.59	25.82

Statement of Educational Progress in CENTRAL PROVINCES and BERAR

	1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles	..	..	..	..	..	..
Population { Male } Female	..	..	..	..	..	..
Total Population..	..	..	..	..	..	..
<i>Public Institutions for Males.</i>	..	..	..	..	..	..
Number of arts colleges ..	4	4	99,823	4	4	99,623
Number of high schools * ..	39	40	6,930,392	43	43	No change.
Number of primary schools ..	3,471	3,846	6,985,916	3,699	3,698	3,799
<i>Male Scholars in Public Institutions.</i>	..	..	..	..	..	..
In arts colleges ..	705	860	1,013	1,081	1,093	1,126
In high schools * ..	3,547	3,624	4,069	4,630	4,924	5,211
In primary schools ..	248,439	274,664	257,980	256,187	253,950	253,135
Percentage of male scholars in public institutions to male population.	3.8	4.2	4.5	4.5	4.5	4.5
<i>Public Institutions for Females.</i>	..	..	..	..	..	..
Number of arts colleges ..	7	7	7	7	7	7
Number of high schools ..	322	320	318	323	316	310
Number of primary schools ..	..	..	..	..	..	..
<i>Female Scholars in Public Institutions.</i>	..	..	..	..	..	..
In arts colleges ..	..	..	1	..	1	1
In high schools ..	51	43	46	59	58	69
In primary schools ..	30,339	33,051	31,533	32,504	33,516	33,635
Percentage of female scholars in public institutions to female population.	4.2	4.6	4.9	5.1	5.3	5.4
TOTAL SCHOLARS in public institutions. { Male } Female..	302,077	328,844	312,755	312,308	312,322	313,612
TOTAL ..	32,854	35,960	34,388	35,394	36,739	37,856
TOTAL SCHOLARS (both male and female) in all institutions.	334,931	364,804	347,143	347,702	349,061	351,468
..	335,248	365,128	347,066	350,381	351,165	353,444
<i>Expenditure (in thousands of rupees).</i>	..	..	..	..	..	..
From provincial revenues ..	11.87	13.82	14.03	15.28	15.96	30.24
From local funds ..	13.88	14.15	15.42	17.56	16.54	6.46
From municipal funds ..	5.70	3.53	4.27	5.37	5.58	4.59
Total Expenditure from public funds ..	29.45	31.50	33.72	38.21	38.08	41.29
From fees ..	3.67	3.91	4.72	5.39	5.73	6.31
From other sources ..	4.76	5.89	5.61	4.25	5.15	5.24
GRAND TOTAL OF EXPENDITURE ..	37.88	41.30	44.05	47.85	48.96	52.84

* Include also Vernacular high schools.

Statement of Educational Progress in the NORTH-WEST FRONTIER PROVINCE.

		1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles	.. ..	..	..	..	..	..	..
Population	{ Male { Female Total Population	..	..	..	..	..	..
<i>Public Institutions for Males.</i>							
Number of arts colleges	.. ..	1	2	2	2	2	2
Number of high schools	.. ..	12	14	14	16	17	17
Number of primary schools..	.. ..	335	440	539	584	585	582
<i>Male Scholars in Public Institutions.</i>							
In arts colleges	.. ..	37	77	148	146	177	188
In high schools	.. ..	5,438	4,997	5,418	5,418	5,469	5,522
In primary schools	.. ..	16,899	22,327	25,601	26,328	25,069	24,848
Percentage of male scholars in public institutions to male population.	.. ..	2.3	2.8	3.1	3.2	3.2	3.2
<i>Public Institutions for Females.</i>							
Number of arts colleges	.. ..	..	..	..	..	..	..
Number of high schools	.. ..	..	..	..	..	..	..
Number of primary schools..	.. ..	29	30	38	40	42	44
<i>Female Scholars in Public Institutions.</i>							
In arts colleges	.. ..	..	..	..	..	..	..
In high schools	.. ..	..	..	..	..	..	..
In primary schools	.. ..	2,044	2,239	2,850	2,918	2,521	2,634
Percentage of female scholars in public institutions to female population.	.. ..	.24	.25	.32	.34	.3	.32
TOTAL SCHOLARS in public institutions. { Male { Female .. ..	.. ..	27,344 2,396	33,124 2,619	37,151 3,280	38,778 3,509	37,946 3,287	37,862 3,363
Total .. ..	.. ..	29,740	35,743	40,431	42,287	41,233	41,225
TOTAL SCHOLARS (both male and female) in all institutions.	.. ..	38,472	44,445	47,744	49,512	46,285	46,134
<i>Expenditure (in thousands of rupees).</i>							
From provincial revenues	.. ..	† 3.68	3.10	2.80	2.86	2.89	5.70
From local funds	.. ..	† 3.06	2.11	2.39	2.72	2.82	84
From municipal funds	.. ..	† 1.76	65	84	69	1.99	70
Total Expenditure from public funds	.. ..	8.50	(a) 5.86	6.03	6.27	7.70	7.24
From fees	.. ..	65	82	93	1,04	1,14	1,21
From other sources	.. ..	47	3.58	2.69	2.12	1.47	1,10
GRAND TOTAL OF EXPENDITURE	.. ..	9.62	10.26	9.65	9.43	10.31	9.55

† Including Rs. 2,60, 1,60 and 1,04 in thousands respectively from Imperial grants.
(a) Including Rs. 2,44 (in thousands) from Imperial grants.

Statement of Educational Progress in COORG.

		1912-13.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Area in square miles							
Population .. { Male							
.. { Female							
TOTAL POPULATION ..							
<i>Public Institutions for Males.</i>							
Number of arts colleges .. ..		....	....	....	....	....	....
Number of high schools		1	1	1	1	2	2
Number of primary schools		84	93	94	91	92	93
<i>Male Scholars in Public Institutions.</i>							
In arts colleges .. ..		....	....	....	....	....	....
In high schools		201	226	249	290	529	605
In primary schools		4,523	4,965	5,118	4,797	4,919	4,950
Percentage of male scholars in public institutions to male population.		5.0	5.5	5.7	5.4	5.6	5.7
<i>Public Institutions for Females.</i>							
Number of arts colleges .. ..		....	....	....	....	....	....
Number of high schools .. ..		....	....	....	....	....	....
Number of primary schools		6	6	7	7	7	8
<i>Female Scholars in Public Institutions.</i>							
In arts colleges .. ..		....	....	....	....	....	....
In high schools		1	....	....	....	....	....
In primary schools		1,943	2,184	2,247	2,259	2,164	2,164
Percentage of female scholars in public institutions to female population.		2.6	2.9	3.0	3.0	2.9	2.9
TOTAL SCHOLARS in public institutions. { Male ..		4,909	5,390	5,577	5,314	5,478	5,583
.. { Female ..		2,033	2,294	2,360	2,365	2,267	2,258
Total ..		6,942	7,684	7,937	7,679	7,745	7,841
TOTAL SCHOLARS (both male and female) in all institutions.		7,545	8,039	8,301	7,985	7,978	7,998
<i>Expenditure (in thousands of rupees).</i>							
From provincial revenues		75	53	63	63	60	65
From local funds		13	17	18	17	13	13
From municipal funds		2	2	2	7	2	1
Total Expenditure from public funds		90	72	83	87	75	79
From fees		13	14	16	16	17	19
From other sources		7	5	5	7	9	10
GRAND TOTAL OF EXPENDITURE ..		110	91	104	1,10	101	108

Statement of Educational Progress in DELHI.

	1913-14.	1914-15.	1915-16.	1916-17	1917-18.
Area in square miles			574½	573	
Population { Male	No change.	No change.	229,342	230,345	No change.
.. { Female			182,207	182,476	
TOTAL POPULATION ..			411,549	412,821	..
<i>Public Institutions for Males.</i>					
Number of arts colleges	2	2	2	2	3
Number of high schools	6	6	6	7	7
Number of primary schools	76	82	87	96	106
<i>Male Scholars in Public Institutions.</i>					
In arts colleges	236	289	309	364	436
In high schools	1,780	1,915	2,011	2,004	2,028
In primary schools	4,877	5,181	5,365	6,064	6,003
Percentage of male scholars in public institutions to female population ..	3·4	3·7	3·8	4·1	4·8
<i>Public Institutions for Females.</i>					
Number of arts colleges .. ..	..	..	..	..	.. 2
Number of high schools .. ..	..	..	..	..	..
Number of primary schools	10	10	13	14	16
<i>Female Scholars in Public Institutions.</i>					
In arts colleges .. ..	..	..	..	..	.. 94
In high schools .. ..	..	..	..	..	..
In primary schools	516	543	701	588	664
Percentage of female scholars in public institutions to female population ..	·66	·99	1·0	1·0	1·01
TOTAL SCHOLARS in public { Male ..	7,580	8,250	8,640	9,537	10,120
institutions .. { Female ..	1,156	1,751	1,980	2,003	1,856
TOTAL ..	8,736	10,001	10,620	11,540	11,976
TOTAL SCHOLARS (both male and female in all institutions)	12,933	13,200	14,085	14,505	15,020
<i>Expenditure (in thousands of Rupees).</i>					
From provincial revenues	69	1,92	1,44	2,20	2,95
From local funds	27	33*	42	64	26
From Municipal funds	47	55†	50	52	45
TOTAL EXPENDITURE from public funds.	1,43	2,80	2,36	3,36	3,66
From fees	83	91	95	1,13	1,28
From other sources	97	1,03	1,24	9,34	6,69
GRAND TOTAL OF EXPENDITURE ..	2,23	4,79	4,55	12,33	11,63

* Includes Provincial contribution of Rs. 12,576.

† Includes Provincial contribution of Rs. 9,763.

Local Self-Government.

Throughout the greater part of India, the village constitutes the primary territorial unit of Government organisation, and from the villages are built up the larger administrative entities—tahsils, sub-divisions, and districts.

"The typical Indian village has its central residential site, with an open space for a pond and a cattle stand. Stretching around this nucleus lie the village lands, consisting of a cultivated area and (very often) grounds for grazing and wood-cutting.... The inhabitants of such a village pass their life in the midst of these simple surroundings, welded together in a little community with its own organisation and government, which differ in character in the various types of villages, its body of detailed customary rules and its little staff of functionaries, artisans and traders. It should be noted, however, that in certain portions of India, *e.g.*, in the greater part of Assam, in Eastern Bengal, and on the west coast of the Madras Presidency, the village as here described does not exist, the people living in small collections of houses or in separate homesteads".—(*Gazetteer of India*.)

The villages above described fall under two main classes, *viz.*—

Types of Villages.—" (1) The 'severalty' or *raiya* village, which is the prevalent form outside Northern India. Here the revenue is assessed on individual cultivators. There is no joint responsibility among the villagers, though some of the non-cultivated lands may be set apart for a common purpose, such as grazing, and waste land may be brought under the plough only with the permission of the Revenue authorities, and on payment of assessment. The village government vests in a hereditary headman, known by an old vernacular name, such as *patel* or *reddi*, who is responsible for law and order, and for the collection of the Government revenue. He represents the primitive headship of the tribe or clan by which the village was originally settled.

" (2) The joint or landlord village, the type prevalent in the United Provinces, the Punjab and the Frontier Province. Here the revenue was formerly assessed on the village as a whole, its incidence being distributed by the body of superior proprietors, and a certain amount of collective responsibility still, as a rule, remains. The village site is owned by the proprietary body, who allow residences to the tenantry, artisans, traders and others. The waste land is allotted to the village, and, if wanted for cultivation, is partitioned among the shareholders. The village government was originally by the *punchayet* or group of heads of superior families. In later times one or more headmen have been added to the organisation to represent the village in its dealings with the local authorities; but the artificial character of this appointment, as compared with that which obtains in a *raiya* village, is evidenced by the title of its holder, which is generally *lambardar*, a vernacular derivative from the English word 'number.' It is this type of village to which the well-known description in Sir H. Maine's *Village Communities* is alone applicable, and here the co-proprietors are in general a local oligarchy with the bulk of the village population as tenants of labourers under them."

Village Autonomy.—The Indian villages formerly possessed a large degree of local autonomy, since the native dynasties and their local representatives did not, as a rule, concern themselves with the individual cultivators, but regarded the village as a whole, or some large landholder as responsible for the payment of the Government revenues, and the maintenance of local order. This autonomy has now disappeared owing to the establishment of local, civil and criminal courts, the present revenue and police organisation, the increase of communications, the growth of individualism, and the operation of the individual *raiya* system, which is extending even in the north of India. Nevertheless, the village remains the first unit of administration; the principal village functionaries—the headman, the accountant, and the village watchman—are largely utilised and paid by Government, and there is still a certain amount of common village feeling and interests.

Punchayets.—For some years there was an active propaganda in favour of reviving the village council-tribunal, on *Punchayet* and the Decentralisation Commission of 1908 made the following special recommendations:—

"While, therefore, we desire the development of a *punchayet* system, and consider that the objections urged thereto are far from insurmountable, we recognise that such a system can only be gradually and tentatively applied, and that it is impossible to suggest any uniform and definite method of procedure. We think that a commencement should be made by giving certain limited powers to *Punchayats* in those villages in which circumstances are most favourable by reason of homogeneity, natural intelligence, and freedom from internal feuds. These powers might be increased gradually as results warrant, and with success here, it will become easier to apply the system in other villages. Such a policy, which must be the work of many years, will require great care and discretion, much patience, and judicious discrimination between the circumstances of different villages; and there is a considerable consensus of opinion that this new departure should be made under the special guidance of sympathetic officers."

This is, however, still mainly a question of future possibilities, and for present purposes it is unnecessary to refer at greater length to the subject of village self-government. An Act was passed in 1912 to provide for the establishment of *punchayats* in the Punjab; but it was contemplated that the areas for which these bodies would be established would be larger than villages, and their functions are limited to the disposal of petty civil suits. In the Punjab, it may be mentioned, village self-government survives to a considerable extent, on a basis of custom, and the desirability of bringing it under statutory regulation has been questioned.

Municipalities.—The Presidency towns had some form of Municipal administration, first under Royal Charters and later under statute, from comparatively early times, but outside of them there was practically no attempt at municipal legislation before 1842. An Act passed in that year for Bengal, which was practically inoperative, was followed in 1850 by an Act applying to the whole of India. Under

this Act and subsequent Provincial Acts a large number of municipalities was formed in all provinces. The Acts provided for the appointment of commissioners to manage municipal affairs, and authorised the levy of various taxes, but in most Provinces the commissioners were all nominated, and from the point of view of self-government, these Acts did not proceed far. It was not until after 1870 that much progress was made. Lord Mayo's Government, in their Resolution of that year introducing the system of provincial finance, referred to the necessity of taking further steps to bring local interest and supervision to bear on the management of funds devoted to education, sanitation, medical charity, and local public works. New Municipal Acts were passed for the various Provinces between 1871 and 1874, which, among other things, extended the elective principle, but only in the Central Provinces was popular representation generally and successfully introduced. In 1881-2 Lord Ripon's Government issued orders which had the effect of greatly extending the principle of local self-government. Acts were passed in 1883-4 that greatly altered the constitution, powers, and functions of municipal bodies, a wide extension being given to the elective system, while independence and responsibility were conferred on the committees of many towns by permitting them to elect a private citizen as chairman. Arrangements were made also to increase municipal resources and financial responsibility, some items of provincial revenue suited to and capable of development under local management being transferred, with a proportionate amount of provincial expenditure, for local objects. The general principles thus laid down have continued to govern the administration of municipalities down to the present day. In several Provinces there are, besides municipalities, "notified areas," *i.e.*, small towns which are not fit for full municipal institutions, but to which parts of the Municipal Acts are applied, their affairs being administered by nominated committees. These are to be regarded as embryo municipalities.

Local Boards.—The establishment of boards for dealing with local affairs in rural areas is a relatively recent development. No such boards existed in 1858, though some semi-voluntary funds for local improvements had been raised in Madras and Bombay, while in Bengal and the United Provinces consultative committees assisted the district officers in the management of funds devoted to local schools, roads and dispensaries. The system of raising cesses on land for purposes of this description was introduced by legislation in Madras and Bombay between 1865 and 1869; in the case of Bombay, nominated committees were to administer the proceeds of the cess. The year 1871 saw a wide development of legislation for local administrative purposes, partly due to growing needs, and partly the result of the financial decentralisation scheme of Lord Mayo's Government, various Acts being passed in different Provinces providing for the levy of rates and the constitution of local bodies, in some cases with an elected element, to administer the funds. The whole system was reorganised in accordance with the policy of Lord Ripon's Government. Under the Orders of 1881-2 the existing local committees were to be replaced by a system of boards

extending all over the country. The lowest administrative unit was to be small enough to secure local knowledge and interest on the part of each member of the board, and the various minor boards of the district were to be under the control of a general district board, and to send delegates to a district council for the settlement of measures common to all. The non-official element was to preponderate, and the elective principle was to be recognised, as in the case of municipalities, while the resources and financial responsibilities of the boards were to be increased by transferring items of provincial revenue and expenditure. It was, however, recognised that conditions were not sufficiently advanced or uniform to permit of one general system being imposed in all provinces, and a large discretion was left to Local Governments. The systems introduced in different parts of India by the Acts of 1883-5 (most of which are still in force) consequently varied greatly.

Mofussil Municipalities.—The total number of municipalities has altered little for many years past. New municipalities have been formed from time to time, but there have also been removals from the list. There was, indeed, a rather marked decrease according to the last decennial review (1902-12) and the number in 1911-12 was actually less than it was thirty years earlier. This result was brought about by the reduction to "notified areas" of a considerable number of the smaller municipalities in the Punjab and United Provinces. The figures showing the constitution of the municipalities call for little comment. Taking them as a whole, the proportion of elected members was in 1911-12 rather more than a half, whereas in 1901-02 it was slightly less. The proportions of non-officials and Indians, already high in 1901, also increased during the decade. Elected members are in the majority in the cities of Bombay, Madras and Rangoon and in Bengal (excluding Calcutta), Bihar and Orissa, the United Provinces, and the Central Provinces; in the North-West Frontier Province and Baluchistan, on the other hand, there are no elected members, and in Burma they form a small minority. Non-officials outnumber officials everywhere, and Indians outnumber Europeans to an even greater degree, except in Rangoon. Taking the municipalities individually, some of the commissioners are elected in the great majority of cases. Representation in the larger municipalities is in general by wards or classes of the community, or both. Voters must be residents not below a specified age, and property or status qualifications are generally laid down. The Chairman or President of the Municipal Corporation is sometimes nominated under the orders of the Local Government, but more often chosen by the commissioners from among themselves. The only provinces in which there has been in the past a large proportion of elected non-official chairmen are Madras, the Central Provinces, and the two Bengals; but Bombay has now to be added to the list, in view of the changes made in that province in the closing years of the decade. Various provisions exist as to the exercise of control by Government, particularly as regards finance and appointments. No loans can be raised without Government sanction, and generally speaking municipal budgets, and alterations in taxation, require the sanction of the Local

Government, or if a Commissioner. Proposals for giving municipal committees a larger degree of independence were put forward by the Decentralisation Commission, and some action on these lines has been taken. Government may provide for the performance of any duty which the commissioners neglect, and may suspend them in case of incompetence, default, or abuse of powers.

Municipal Revenues.—In the provinces in which octroi is levied generally, it is the most important source of income. The octroi duties have admitted disadvantages, but they are familiar through long usage to the inhabitants of the North and West of India. The possibility of abolishing them was under consideration during the last decade, and it was decided in the United Provinces to take this step in many municipalities, but the alternative of direct taxation is not a popular one. Precautions are taken to limit the tax to articles actually consumed in a town, and to prevent it from becoming a transit duty. The list of dutiable articles contains in each case only staple articles of local consumption and goods in transit are allowed to pass in bond or receive a refund of the duties on leaving the town. Articles of food are the most important class of goods subject to octroi taxation.

Incidence of Taxation.—A tax on houses and lands is levied to some extent in all provinces, and is the main source of municipal revenue where there is no octroi. Taxes on professions and trades, and on animals and vehicles, are generally levied, as also is a water-rate in the large towns that have been

furnished with water works. Tolls on roads and ferries and lighting and conservancy rates contribute to the receipts in most provinces. The average incidence of municipal taxation per head of municipal population in 1911-12, for British India, as a whole, was Rs. 2·95. Leaving out of account the Presidency towns, where the figures are higher, the provincial averages ranged from Rs. 3·08 in the North-West Frontier Province and Rs. 2·38 in the Punjab, to Rs. 1·35 in Madras and Rs. 1·02 in Coorg. Other sources of revenue are municipal lands and buildings, conservancy receipts (other than the rates), educational and medical fees, receipts from markets and slaughter-houses (a very important item in Burma), and interest on investments.

Municipal Functions.—Municipal functions are classified under the heads of public safety, health, convenience and instruction. Within these heads the duties are many and varied. Expenditure, apart from that on general administration and collection, which amounts to something less than 10 per cent. of the total, is similarly classified. The principal normal functions of municipalities now are the construction, upkeep, and lighting of streets and roads, and the provision and maintenance of public and municipal buildings; the preservation of the public health, principally with reference to the provision of medical relief, vaccination, sanitation, drainage and water-supply, and measures against epidemics; and education, particularly primary education. Money is raised by loan for water-supply and drainage schemes, the cost of which is too large to be defrayed from ordinary revenues.

THE PRESIDENCY TOWNS.

The corporations of the Presidency towns occupy a special position, and are constituted under special Acts.

Calcutta.—The municipal administration of Calcutta is regulated by the Calcutta Municipal Act of 1899, which replaced an Act of 1888, the working of which had not been altogether satisfactory. The Corporation, as remodelled by the Act of 1899, consists of a Chairman, appointed by the local Government, and fifty commissioners, half of whom are elected at triennial ward elections, while the remainder are appointed, four each by the Bengal Chamber of Commerce and the Calcutta Trades Association, two by the Port Commissioners, and fifteen by the local Government. The Act also constitutes a smaller body, the General Committee, consisting of the Chairman with twelve of the commissioners, four elected by the ward commissioners, four elected by the other commissioners and four appointed by the local Government. There are various special committees and sub-committees. An amending Bill has been published.

The entire executive power is vested in the Chairman, to be exercised subject to the approval or sanction of the Corporation or General Committee, whenever this is expressly directed in the Act. To the Corporation are reserved the right of fixing the rates of taxation and such general functions as can be efficiently performed by a large body, while the General Committee stands between the deliberative and executive

authorities, and deals with those matters that are ill-adapted for discussion by the whole Corporation but too important to be left to the disposal of the Chairman alone. Power is reserved to the local Government to require the municipal authorities to take action in certain circumstances, and their sanction is required to large projects.

Bombay.—The municipal corporation of Bombay, which formed the model for the new Calcutta constitution, dates in its main features from 1872 and continues to be regulated by the Act of 1888 as amended. Some important changes were made by the City of Bombay Police Charges Act of 1907, which relieved the corporation of the police charges of the city, and made over to them in exchange further responsibility for primary education, medical relief and vaccination.

The Corporation consists of 72 councillors, of whom 36 are elected by wards, 16 by the justices of the peace, 2 by the Fellows of the University, and 2 by the Bombay Chamber of Commerce, the remaining 16 being appointed by Government. The general municipal government is vested in the Corporation, while the ordinary business is transacted by a Standing Committee of 12 councillors, 8 appointed by the Corporation and 4 by Government. The president of the corporation is elected by the councillors but is not, like the chairman of the Calcutta Corporation, an executive officer. The

chief executive authority is vested in a separate officer, appointed by Government, usually from the ranks of the Indian Civil Service, styled the Municipal Commissioner, who can, however, be removed by a vote of 45 councillors.

Madras.—A new Municipal Act for the City of Madras was passed in 1904. By this Act the number of the municipal commissioners, to whom as a body the name Corporation was now applied, was increased from 32 to 36, besides the President, and provision was made for the appointment of three commissioners each by the Madras Chamber of Commerce and the Madras Trades Association, and of two by such other associations, corporate bodies, or classes of persons, as the Local Government might direct, while the number to be elected as divisional elections was fixed at 20. Under the Act previously in force the total number of elected commissioners was not more than 24. The

remaining commissioners were appointed, as they are under the new Act, by the Local Government, who also appoint the President. The Act of 1904 also introduced various other changes in the law which need not be specially noticed; it was modelled to a large extent on the Calcutta Act of 1899. Executive authority is vested in the President, who is removable under the existing law, by a vote of 28 commissioners. A Standing Committee, consisting of the president and eight other commissioners, is mainly concerned with financial and building question. The President, like the chief executive officers in Calcutta and Bombay, is usually a member of the Indian Civil Service. The number of persons enrolled as voters in 1911-12 was 9,824 rather more than 6 per cent. of the total adult male population. The control of the Local Government over the municipality has hitherto been more stringent than in the other Presidency towns.

DISTRICT AND LOCAL BOARDS.

The duties and functions assigned to the municipalities in urban areas are in rural areas entrusted to District and Local Boards. The systems of rural local government in the various provinces differ widely. The Madras organisation, which provides for three grades of local boards, most nearly resembles the pattern set in the original orders. Throughout the greater part of that province important villages and groups of villages are organised as "Unions", each controlled by a PANCHAYAT. These bodies receive the proceeds of a light tax on houses, and spend them mainly on sanitation. Next come the Taluk Boards, which form the agency for local works in the administrative sections into which the districts are divided. Finally, there is the District Board, with general control over the local administration of the district. In Bombay there are only two classes of boards, for districts and TALUKAS respectively. In Bengal, the Punjab, and the North-West Frontier Province the law requires a District Board to be established in each district, but leaves the establishment of subordinate local boards to the discretion of the Local Government. The Bengal Act authorises the establishment of village Unions also, but this provision has not been very largely used. The United Provinces Act formerly in force directed the establishment of district and sub-district boards, but the latter were abolished, as mentioned below, in 1906. The system in the Central Provinces bears some resemblance to that which prevails in Madras, the villages being aggregated into "circles", and the circles into "groups", each of which has a Local Board, while for each district there is a District Council having authority over the Local Boards. In Assam district boards have not been introduced, and independent boards are established in each sub-division. Neither district nor sub-district boards exist in Burma, or in Baluchistan. District boards were started in Lower Burma in accordance with Lord Ripon's Local Self-Government Resolution of 1882, but the members took no active interest in them, and they died out after a few years. The district funds are now administered by the Deputy Commissioners of districts.

Elective Principle.—The degree to which the elective principle has been introduced varies greatly in different parts of India; but there is a considerable proportion of elected members everywhere, except in the North-West Frontier Province, where the system of election was abolished in 1903. On the whole, however, the principle of representation is much less developed in rural than in municipal areas. In Madras the elective system, previously applied to the district boards only, was extended to the Taluk Boards in 1909. In the United Provinces and the Central Provinces there is a substantial majority of elected members.

Chairmen.—The various Acts usually leave it to the Local Government to decide whether the Chairman of the district board shall be elected or nominated. In most provinces the Collector has, as a general rule, been appointed, though in the Central Provinces the president is elected, and is usually a non-official. In the United Provinces election, subject to the veto of the Local Government, was prescribed by the Act of 1906, but in practice the Collector is chosen. As regards the subordinate boards, the law and practice vary. Generally speaking, the sub-district boards are on the footing of subordinate committees or agencies of the district boards, with very limited powers and resources; but in Madras they exercise independent authority, subject to the general control of the district boards, in regard to the less important roads, primary education, medical work, and sanitation.

Provision is made, on much the same lines as in the case of municipalities, for the exercise of control in certain directions by Government or its officers.

Sub-District Boards.—The Decentralisation Commission, having in view the admitted failure of sub-district boards as a whole, under existing arrangements, except in Madras and Assam, put forward proposals for making them the principal agencies of rural board administration by giving them independent resources, separate spheres of duty, and large responsibilities. Proposals for giving the district boards a larger measure of independence were also put forward.

Revenue and Expenditure.—The sources of income open to rural boards are much narrower and less elastic than those of the municipalities. The greater part of their revenue is derived from a cess which they are empowered to levy on the land, and which usually does not exceed one anna in the rupee on the annual rent value (or, in ryatwari provinces, the Government assessment). The cess is ordinarily collected by Government agency along with the land revenue, and varies in amount with the latter. Since 1905 the income derived from the land cess has been supplemented by a special Government contribution calculated at the rate of 25 per cent. of that income. Sub-

stantial amounts, apart from this special contribution, are granted to the district boards by the Local Governments for various purposes. Apart from receipts in connection with their educational and medical institutions, and markets, the only other important sources of independent revenue are pounds and ferries, and, in Madras, road tolls. Except in Madras, the sub-district boards have generally no independent sources of income, and merely receive such moneys as the District Boards may allot to them. In Madras the Taluk Boards receive half the land cess levied in their areas, as well as certain miscellaneous revenues.

District and Local Boards.—The following table shows the general constitution of the boards in each province, with their income and expenditure in 1916-17, the latest year for which statistics are available :—

Administrations.	No. of Boards.	No. of Members.		Income.		Total Expenditure.
		Elected.	Ex-officio and Nominated.	Total.	Incidence per Head.	
				£	d.	£
Bengal	97	640	734	707,331	3½	733,630
Bihar and Orissa	59	270	607	574,744	4	567,953
United Provinces	48	807	272	744,348	3½	735,628
Punjab	47	545	852	539,096	8½	550,526
Delhi	1	..	20	7,788	10½	7,095
North-West Frontier Province.	5	..	218	39,393	5	37,086
Central Provinces and Berar.	102	1,368	496	282,218	5	283,060
Assam	19	202	121	144,256	5½	141,848
Ajmer-Merwara	1	16	25	4,362	3	4,118
Coorg	1	2	17	6,183	8½	5,766
Madras	532	1,176	5,149	1,624,548	5½	1,598,824
Bombay	241	1,703	1,948	578,283	7½	544,066
Total, 1916-17 ..	1,153	6,729	10,459	5,252,550	5½	5,209,540

POLICY OF GOVERNMENT DEFINED.

The Government of India issued on April 28th, 1915, a long resolution dealing with the growth and future of local self-government in India. From what has gone before it will have been seen that the Decentralisation Commission made many and detailed recommendations on this question, and the intention of the resolution was to summarise policy on these points, as well as to complete the chain of pronouncements of policy which commenced with the education resolution and was followed by the sanitary resolution. Owing however to the wide diversity of conditions in India, and the extent to which local self-government must be a provincial question, it was not apparently possible to lay down broad and simple lines, especially as in the main the development of local self-government is a question of the provision of funds, and no one has suggested whence they shall come, except in the way of doles from the Imperial Exchequer, which is already overburdened. The Resolution was

therefore received with mixed feelings. Those who expected a declaration of a bold forward policy were disappointed, whilst those who realised the difficulties inherent in the working of the principle until some means of providing the necessary funds are devised realised that it went as far as possible in existing conditions.

The resolution commenced with the expression of opinion that the results on the whole have justified the policy out of which local self-government arose. The degree of success varies from province to province and from one part of a province to another, but there is definite and satisfactory evidence that of a growth of a feeling of good citizenship, particularly in the large towns. "On all sides there are signs of vitality and growth." Of the obstacles in the way of realising the ideals of the past the resolution placed in the forefront the smallness and inelasticity of the local revenues, then the indifference still prevailing in many places towards all forms of public life.

On a review, the Government of India decided to accept the view of the local-government or administration as to the degree of progress possible at the present time. Local Governments and Administrations, the resolution added, were prepared to advance in the direction of the main recommendations of the Decentralisation Commission.

Turning to details the resolution showed that of the 695 **Chairmen of Municipalities** 222 consisted of elected non-officials, 248 of elected officials, 51 of nominated non-officials, 174 of nominated officials. The election of non-official chairmen has long been urged by Indian politicians, and their views have been so far accepted that the majority of Local Governments are in favour of substituting, so far as possible, non-official for official chairmen. With regard to the larger municipalities, the Bombay system is now very much in favour. This consists in the main of a constitution under which an elected chairman is the mouth-piece of the corporation, whilst the head of the executive is an official nominated by Government but under the control of the Corporation. Whilst not pressing this system on all Local Governments, the resolution pointed out that it had the advantage of securing a continuous and strong executive administration by a paid staff, whilst maintaining the corporate control and activity of the municipal board. As to the **financial resources** of the municipalities, it was shown that the aggregate income of the 701 municipalities in existence at the close of 1912-13 (excluding the Presidency towns and Rangoon) amounted to £3,282,845, or Rs. 4,92,42,675 apart from extraordinary receipts, or an average of £4,683 or Rs. 70,245 a year. This shows a very rapid expansion. Contributions from Government have materially assisted this expansion. Since 1911, the Government of India have made grants amounting to £3,076,466 (Rs. 4,61,47,000), of which £368,200 (Rs. 55,23,000) are recurring, for urban sanitation. Municipalities have also received their share—the exact figure is not easily ascertainable—of the large educational grants made by the Government of India since 1911, amounting to about £3,987,800 (Rs. 5,98,17,000), of which £826,666 (Rs. 1,24,00,000) are recurring. Municipal boards have been relieved of all charges for the **maintenance of police** within municipal limits. In almost every province the recommendation that municipalities should be relieved from financial responsibility for famine relief and should receive assistance from Government in the case of severe epidemics, has been already given effect to, or the principle has been accepted. The Government of India have also accepted a further recommendation, namely, that assistance may legitimately be given by Government to poorer municipalities which, without it, would be unable to carry on the normal standard of administration required from them.

On the very important subject of financial control, which is sometimes described as minute the Government of India suggested that the municipalities should have a freer hand with regard to their budgets, the only check being the maintenance of a prescribed minimum balance. They held this out as the policy which should steadily be kept in view.

The Decentralisation Commission recommended that **sub-district boards** should be universally established and that they should be the principal agencies of rural administration. The Government of India left this question to the discretion of the Local Governments. The Local Governments favoured a policy where district and sub-district boards should contain a large preponderance of elected members. They took the view, in which the Government of India concurred, that an official should remain chairman of every district and sub-district board. The total number of district and sub-district boards in 1913 was 199 and 536 respectively, with an aggregate income of £3,787,219 (Rs. 5,68,08,292). In the same year they received specially large grants from the sums allotted by the Imperial Government for education and sanitation. The resolution analysed at some length the proposal that district boards should be empowered to levy a railway or tramway cess, in order to expedite the improvement of communications. The Government of India have empowered district boards to levy a special extra land cess of three pies in the rupee on the annual rent value of land for the construction of light railways or tramways, conditional on the proposal obtaining the assent of three-fourths of the members of the board. The Government of India also decided that the board could issue debentures secured on the railway property when its accumulated funds were insufficient to bear the cost of construction. They also recommended that the present restrictions on the financial powers of the boards should be gradually relaxed, in the direction of securing full discretion subject to the maintenance of the prescribed working balance.

Turning to the organisation of the **villages** the resolution expressed the views of the Government of India towards the establishment of panchayets in the following passage:—"where any practicable scheme can be worked out in co-operation with the people concerned, full experiment should be made on lines approved by the local government or administration concerned." With this general recommendation they left the matter to the local authorities. With regard to the **Presidency Corporations**, the Decentralisation Commission recommended that the Bombay system of an unofficial chairman and an official head of the executive should be generally followed. Bengal and Madras agreed generally with the proposal, but Rangoon regarded it as unsuitable to the conditions there obtaining. The Government of India declined to endorse the suggestion that a **Local Government Board** should be formed in each Province for the control of the local bodies. In conclusion, the resolution summarised the policy of the Government of India towards the development of local self-government as one of prudent boldness, calculating risks but not afraid to take them in the cause of progress.

Since this resolution was issued the Bombay Government has appointed a strong mixed committee to consider the whole question of local self-government in the rural areas, whose report is awaited with great interest.

Local Government Statistics.

Municipalities.—With this general introduction we can now turn to the statistical results of the working of Local Self-Government. The following table gives information as to the constitution of municipal committees, taxation, &c., in the chief provinces in 1917-18:—

	Population within Municipal Limits.	Number of Municipalities.	Total Number of Members	By Qualification.			By Employment.		By Race.		Incidence of Municipal Taxation per head.	
				Ex-Officio.	Nominated.	Elected.	Officials.	Non-Officials.	Euro-peans.	Indians.		
Presidency Towns.												
Calcutta	861,501	1	50	—	25	25	3	47	17	33	s. d. 15 0	
Bombay	979,445	1	72	—	16	56	5	67	16	56	18 3	
Madras	518,660	1	33	1	14	18	4	29	10	23	6 0	
Rangoon	284,935	1	25	1	6	18	2	23	11	14	16 0	
District Municipalities.												
Bengal	1,973,799	115	1,574	111	492	971	185	1,389	135	1,439	3 1	
Bihar and Orissa	1,179,885	56	786	133	184	469	134	652	79	707	2 5	
Assam	131,302	22	234	40	77	117	50	184	30	204	3 4	
Bombay and Sind	2,359,633	155	2,196	365	804	1,027	423	1,773	96	2,100	4 0	
Madras	2,275,006	72	1,090	89	448	553	176	914	110	980	2 7	
United Provinces	2,966,314	83	1,009	64	87	858	81	928	77	932	2 10	
Punjab	1,617,393	100	1,154	226	386	542	245	909	87	1,067	3 11	
N. W. Frontier Province	141,928	6	117	34	83	..	35	82	16	101	5 8	
Central Provinces and Berar..	893,052	57	790	10	274	506	155	635	52	738	3 1	
Burma	694,264	44	562	178	289	95	199	363	116	446	3 7	

Sanitation.

The history of the sanitary departments in India goes back for about fifty years. During that period great improvements have been effected in the sanitary condition of the towns, though much remains to be done; but the progress of rural sanitation which involves the health of the great bulk of the population has been slow, and incommensurate with the thought and labour bestowed on the subject. "The reason lies in the apathy of the people and the tenacity with which they cling to domestic customs injurious to health. While the inhabitants of the plains of India are on the whole distinguished for personal cleanliness, the sense of public cleanliness has ever been wanting. Great improvements have been effected in many places; but the village house is still often ill-ventilated and over-populated; the village site dirty, crowded with cattle, choked with rank vegetation, and poisoned by stagnant pools; and the village tanks polluted, and used indiscriminately for bathing, cooking and drinking. That the way to improvement lies through the education of the people has always been recognised."

Of recent years the pace has been speeded up as education progressed, education developed, and funds were available. In a resolution issued in May 23rd, 1914, the Government of India summarised the position at that time, and laid down the general lines of advance. This resolution (*Gazette of India*, May-25th, 1914) should be studied by all who desire to understand the present position and policy: its main features are summarised here.

The governments in India have moved more rapidly of late. In 1898, the Government of India issued an important statement of policy. In 1908, Imperial grants amounting to Rs. 30,00,000 (£200,000) a year were made to local Governments. A new department of the Government of India was created in 1910 in order to relieve the Home Department of education, sanitation and some other branches of the administration. In addition to sanitary conferences held by local Governments, three All-India sanitary conferences were convened at Bombay, Madras and Lucknow, respectively, over which the Hon'ble Sir Harcourt Butler presided as Member of the Governor-General's Council in charge of the department concerned. These conferences were attended by non-officials as well as officials, by laymen as well as professional sanitarians. Again, the **Indian Re-**

search Fund Association has been founded to further the prosecution of research, and the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases. To this fund the Government of India make an annually recurring grant of 5 lakhs of rupees (£33,333). Moreover since the constitution of the new department of the Government of India, Imperial grants have been made to local Governments and Administrations to the amount of Rs. 4,61,47,000 (£3,076,466), of which Rs. 55,23,000 (£368,200) are recurring, and Rs. 4,06,24,000 (£2,708,266) non-recurring. In addition, grants amounting to Rs. 82'33 lakhs (£548,866) a year have been made to district boards in certain provinces, a substantial portion of which will, it is hoped, be expended on rural sanitation. These grants have rendered practicable the execution of schemes which a few years ago seemed beyond the limits of financial possibility; and there can be little doubt that the movement for sanitary reform is now well established and progressive throughout the country.

Organisation.—As a result of the Plague Commission's Report Lord Curzon's Government took up with vigour the reorganisation of the sanitary department. Research institutes were started and an appointment of Sanitary Commissioner with the Government of India was created. The functions of this officer were to advise the Government of India upon sanitary and bacteriological questions to settle with local Governments the principles on which an advance should be made and to organise and direct research throughout India. The arrangement was not completely successful. Among the disadvantages, the separation of research from clinical work deterred men from entering the department, and the office work in connection with research prevented the Sanitary Commissioner from undertaking wide and constant touring. The organisation was accordingly modified in 1912. The Sanitary Commissioner is now the independent adviser to the Government of India in all technical and sanitary matters, but all questions of personnel as well as the administration of the bacteriological department and research generally have been placed under the control of the Director-General, Indian Medical Service, with the Sanitary Commissioner as his staff officer.

The Sanitary Organisation.

The sanctioned strength of the superior sanitary organisation in India now is

(a) A Sanitary Commissioner with the Government of India.

(b) A bacteriological department comprising—

(i) thirteen laboratory appointments distributed as follows:—

Central Research Institute	..	..	1	Director and 3 Assistants.
Bombay Bacteriological Laboratory	..	..	1	Director and 2 Assistants.
King Institute of Preventive Medicine, Madras	..	..	1	Director and 1 Assistant.
Pasteur Institute, Kasauli	..	..	1	Director and 1 Assistant.
Pasteur Institute, Coonoor	..	..	1	Director and 1 Assistant.

(ii) fifteen new appointments recently sanctioned for the prosecution of research work and direct investigation in the field.

(c) The following establishments under local Governments :—

Province.	Sanitary Commissioners.	Deputy Sanitary Commissioners.	Health Officers, Sanitary Engineers.			
			1st class.	2nd class.	Sanitary Engineers.	Deputy or Assistant Sanitary Engineers.
Madras	1	3	12	19	1	6
Bombay	1	5	4	9	1	..
Bengal	1	5	6	17	1	2
United Provinces	1	4	11	17	1	3
Punjab	1	2	2	5	1	1
Burma	1	2	4	16	1	2
Bihar & Orissa	1	3	2	8	1	2
Central Provinces	1	..	..	2	1	..
Assam	1	1	..	..	1	..
North-West Frontier Province	1	1	1	1	..	..
Delhi	1	..	3	..	1	..
Total	11	26	45	94	10	16

Provincial Agency.—In their resolution, dated the 23rd May 1912, the Government of India provided for a large increase in the number of Deputy Sanitary Commissioners and for the appointment of health officers (of the first-class for larger municipalities and of the second-class for the smaller towns) on the lines of detailed proposals received from local Governments. Twelve additional appointments of Deputy Sanitary Commissioner, thirty-five appointments of health officer of the first-class and a large addition to the number of second-class health officers were sanctioned in 1912 and 1913, the entire cost of the additional Deputy Sanitary Commissioners on the basis of the scale of pay fixed for Indians and half the cost of the health officers being met by imperial grants. The Government of India also advised local Governments to take powers, where these did not exist, to require a municipality to appoint a health officer and to veto the appointment of an unfit person. Such powers already exist in the Bombay Presidency, and have recently been taken by legislation in Bengal. Simultaneously, the Government of India recommended the system in force in Madras whereby every municipality is required to employ one or more trained sanitary inspectors in proportion to population. Sanitary inspectors are now being employed in large numbers in towns. In addition, the civil surgeon in every district is the sanitary adviser of the local authorities and in most provinces controls the vaccination staff. The provision of an increased staff of sanitary engineers is engaging urgent attention.

Voluntary Agency.—The Government of India attach great importance to the organisation of voluntary agencies and have recently made a grant of Rs. 20,000 (£1,333) a sum equivalent to that given by the Bombay Government to the BOMBAY SANITARY ASSOCIATION, which was founded in 1903, and now has

corresponding branches in several districts and Native States.

Research.—The policy of the Government of India is to keep the control of research under itself, but to decentralise other branches of sanitation. The creation of an imperial department is no departure from that policy, and the large imperial grants already mentioned have been made without any interference with provincial Governments. While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local Governments. The Sanitary Commissioner with the Government of India is a touring officer empowered to consult and confer informally with local Governments and their officers upon matters connected with sanitation. He is not permitted to encroach upon the authority of Local Governments over the officers under their control.

Provincial Officers.—The position of Provincial Sanitary Commissioners towards the administrative heads of the medical department varies somewhat in different provinces. The Government of India do not wish to interfere with the arrangements which local Governments may consider best suited to local conditions but they desire to insist on the importance of defining the functions of the two officers and securing to the Sanitary Commissioner the position of responsible technical adviser to the local Government in all matters affecting public health.

Sanitary Boards.—In every province, sanitary boards have been composed with varying powers, some being merely advisory, others having authority to sanction schemes and allot funds. These boards are composed of officers belonging to the medical, sanitary, engineering and other branches of the civil services with the

addition of non-officials. The Government of India view with favour and confidence the devolution of financial authority and responsibility to these boards, and they commend to local Governments the appointment of a permanent salaried secretary to the board where this has not been done. They believe that such an appointment, wherever made, has resulted in an increase of efficiency.

Training.—Arrangements for training the superior sanitary staff are now engaging the attention of the Government of India. The chief difficulty at present is to provide courses in practical hygiene and in the study of the bacteriology and etiology of tropical diseases. It is hoped in the near future to make arrangements in India for the former and to utilise the schools of tropical medicine at Calcutta and elsewhere for the latter. Meanwhile, a British diploma in public health is required from candidates for the post of Deputy Sanitary Commissioners and health officers of the first class. The problems of public health in India are vitally complicated by the fact that biting insects are a prominent factor in the dissemination of disease and it is obviously desirable to provide in India, as soon as possible, a complete course of training for sanitary officers.

Training classes for sanitary inspectors are now held in all the more important provinces.

Department of Public Health.—A substantial beginning has thus been made for the development of a department of public health and Indians have been freely enlisted for it. The posts of Deputy Sanitary Commissioner and health officer are now open to Indians. Nine Deputy Sanitary Commissioners out of 26 and the majority of health officers are Indians. The new bacteriological department consisting of 28 officers is also open to duly qualified Indians.

As health officers and Sanitary Engineers gradually relieve Deputy Sanitary Commissioners of much of the drudgery of inspection and routine work, it is hoped that the latter will be set free to deal with epidemics and communicable diseases from a higher plane, and to consider issues of public health wider than those which they are able to review to-day. It is therefore important to provide in advance free interchange between them, the laboratory workers and those carrying out practical research in the field.

Progress of Research.—Research is slowly lifting the veil which hides the secrets of disease and mortality and opening up fields of inquiry scarcely thought of a generation ago. The discovery by Sir Ronald Ross of the part played by the mosquito in the communication of malaria and the appointment of the Plague Commission in 1898 are landmarks in the history of Indian Sanitation. In 1902, a research institute was founded at Guindy in Madras, named the King Institute after Lieutenant-Colonel King, C.I.E., I.M.S., in view of his devoted efforts in the cause of sanitation in that presidency. In 1905 Lord Curzon's Government summed up the position and the policy of the Government of India in regard to the establishment of laboratories for the study of problems of public health in India. The functions of the central-laboratory were original research, the preparation of curative sera and

the training of scientific workers. The functions of the provincial laboratories were diagnosis and special research connected with local conditions. This policy has been steadily developed. The Central Research Institute has been established at Kasauli. The Plague Research Laboratory at Parel has been extended and re-equipped and is now the bacteriological laboratory for the Bombay Presidency; and a proposal is under consideration to attach to it a school of tropical medicine. A research laboratory and school of tropical medicine are under construction at Calcutta. Pasteur institutes exist at Kasauli and Coonoor. A third is about to be established in Burma, and it is under discussion to establish others in Assam (where it will be combined with a research laboratory) and Bombay.

Besides the routine work connected with the bacteriological diagnosis of disease, anti-rabic treatment, the manufacture of various vaccines and sera and general research, these laboratories at different times have been the centres of many special investigations, notable amongst which are those on plague and enteric fever. It is hoped that before long each province in India will have a laboratory fully equipped for research.

Research Fund Association.—The foundation of the Indian Research Fund Association in 1911 has marked an important era in sanitary progress. The control and management of the association are vested in a governing body, the president of which is the Member in charge of the Education Department of the Government of India. The governing body is assisted by a scientific advisory board, of which not less than three members have seats on the governing body. They examine all proposals for work in connection with the scientific objects of the association and report as to their importance and feasibility. The members of this board are appointed for one year, but are eligible for re-election, and they have power to add to their number. The present members are the Director-General, Indian Medical Service, the Sanitary Commissioner with the Government of India, the Director of the Central Research Institute at Kasauli, the Officer in charge of the Central Malerial Bureau and the Assistant Director-General, Indian Medical Service (Sanitary). Sir Ronald Ross has been elected an honorary consulting member. The membership of the Indian Research Fund Association is open to non-officials. Every donor of Rs. 5,000 is entitled to become a permanent member, while every subscriber of Rs. 100 per annum can be a temporary member. Members of the association are entitled to attend and take part in the annual general meeting of the association and to receive copies of the reports and other publications issued from time to time by the association. Although, so far, the fund has been financed solely by the Government of India, it is hoped that in time Indian philanthropists will contribute towards the expansion of the association by founding chairs of research by financing experimental research measures and otherwise.

The association has also started a journal for the publication of medical research work done in India—the "INDIAN JOURNAL OF MEDICAL RESEARCH"—published quarterly. The fav-

ourable reception which has been accorded to the first three numbers is evidence of the increased interest that is being taken in sanitary science in India to-day.

Water Supply.—Few subjects have received more attention of late than the provision of a piped supply of filtered water in towns. Complete figures are not available but sums amounting to at least Rs. 3,51,58,297 (£2,343,886) have been spent during the last 20 years on completed schemes. Projects costing Rs. 1,10,03,433 (£933,562) are under construction and projects costing Rs. 1,14,44,750 (£762,983) have been prepared and sanctioned. These figures are exclusive of the expenditure in the Presidency towns and Rangoon.

Drainage.—Drainage schemes on modern lines, are the basis of all sanitary improvement in urban areas. The demand for them is scarcely less than that for piped water and is steadily on the increase. As in the case of water supply complete figures are not available but the known expenditure during the last twenty years has been considerable and is now rapidly increasing. The expenditure on completed works outside the Presidency towns and Rangoon during that period amounted to Rs. 97,65,049 (£651,003), whereas the cost of the works under construction is estimated at Rs. 1,54,20,502 (£1,028,033). In the beginning precedence over drainage was given to piped water-supply but experience has demonstrated the advantage of introducing both concurrently. Without drainage there is no means of carrying off the surplus water and without piped water-supply it is difficult to flush the drains properly.

When drainage schemes on modern lines were first started in this country, there seems to have been a bias against the use of sewers, and, wherever possible, open drains were adopted. Experience has shown that the preference for the open drain and the fear that sewers would give excessive trouble were not well founded. On the contrary, much of the advantage of a drainage system is lost if only open drains are used, as the old system of hand-carriage latrines has to be continued. Moreover, economy in establishment is possible only in the case of a sewage system.

Pilgrimages.—Pilgrimages necessitating as they do the collection of large numbers of persons, often more than a million, at one place at one time have an important sanitary aspect mainly in connection with cholera and other communicable diseases. The Government of India recently decided to examine the sanitary arrangements at the chief places of pilgrimage throughout India and local Governments were asked to appoint provincial committees for this purpose under the presidency of the Sanitary Commissioner with the Government of India with a view to formulate practical schemes of improvement. The inquiry is still in progress but the Government of India have already made a grant of Rs. 2 lakhs (£13,333) and promised an additional grant of 4 lakhs of rupees (£26,666) spread over four years towards the improvement of the pilgrim route to Badrinath; and they have made a further recurring grant of Rs. 20,000 (£1,333) a year for the same object. The important question of improving the conditions of the pilgrimage to the Hedjaz by Indian Muslims

is undergoing close scrutiny. The Governor-General in Council anticipates that these inquiries will lead to signal sanitary improvements and promote the convenience and comfort of many millions of His Majesty's loyal Indian subjects.

Rural Sanitation.—The following observations are based on practical experience of rural sanitation :—

- (a) Travelling dispensaries may be used to spread a knowledge of the simple facts regarding the more common diseases. For this purpose the sub-assistant surgeons in charge should be given a special training in hygiene. Once they become known to the people as healers of the sick their advice as sanitarians may become more acceptable.
- (b) The improvement of the village water-supply is as important as it is difficult. Apparently, excellent results have been obtained by disinfection of wells with permanganate of potash. Experiments are being made in different parts of India in the use of tube-wells, etc. It might serve as an useful object lesson to use pumps and tube-wells for the provision of water at fairs, schools, hospitals, and local public offices. In some localities, a tank supply alone is possible and the difficulty is to protect even new tanks from pollution.
- (c) In several provinces, notably in Madras, village unions or circles have been formed and their committees entrusted with small grants for the improvement of the sanitation of the village site. This measure might be extended experimentally elsewhere. It is calculated to encourage discussion and inquiry regarding sanitary work.
- (d) Village midwives are, in some districts, encouraged by small grants of money and rewards to attend at the headquarters hospital for a short and simple course of training. These measures open up possibilities with reference to a reduction in infantile mortality and children's diseases generally.
- (e) In most districts in India, the civil surgeon is also in theory the sanitary officer of the district. His duties at headquarters, however, do not allow him to tour and inspect in the district to the extent that is necessary; even in the case of epidemics in the district it is sometimes not possible for him to leave headquarters. In some provinces, district sanitary officers have been appointed and there can be little doubt that many more such appointments are required and that one of the most urgent and hopeful measures for promoting rural sanitation is the appointment of well qualified and whole-time district health officers to control and organise all sanitary arrangements and experiments in the district.

Birth and Death Rates.—The population of the areas in which births and deaths were registered in 1917 was 238,496,222. 9,379,349 births and 7,803,832 deaths were registered; the rates per mille being 38·41 and 32·72 as compared with an average of 38·42 and 29·19 respectively for the previous five years.

The lowest birth rates were recorded in Coorg 30·51; Assam 31·35; North-West Frontier Province 32·1; and Madras 32·4; but an excess of births over deaths was noticed in all the provinces except Ajmer Merwara and Bombay. The death-rates of Bengal, Central Provinces and Berar and Assam were lower than in the preceding year, while Bombay's death rate was 7·44 in excess of the rate for the previous year.

Province.	Birth Rates (per mille).		Death Rates (per mille).	
	1916.	1917.	1916.	1917.
Delhi	49·89	52·75	32·92	32·68
Bengal	31·89	35·91	27·37	26·19
Bihar and Orissa	36·6	40·4	32·8	35·2
Assam	30·52	31·35	28·59	27·9
United Provinces	43·9	46·8	29·50	37·91
Punjab	45·6	45·3	30·7	37·9
N. W. Frontier Province	33·8	32·1	30·1	29·9
Central Provinces and Berar	43·85	48·13	39·95	36·6
Madras	32·5	32·4	21·9	26·2
Coorg	28·74	30·51	27·23	28·87
Bombay	35·98	35·73	33·32	40·76
Purma, Lower	32·75	35·58	22·61	24·80
Burma, Upper	35·30	37·34	26·21	26·13
Ajmer-Merwara	38·68	36·81	40·48	102·96
Total ..	37·13	39·33	29·10	32·72

Chief Diseases.—There are three main classes of fatal disease: specific fevers, diseases affecting the abdominal organs, and lung diseases. Intestinal and skin parasites, ulcers and other indications of scurvy widely prevail. The table below shows the number of deaths from all causes and from each of the principal diseases in British India and death-rates per 1,000:—

Years.	Deaths from all Causes.	Cholera.	Small-Pox.	Fevers.	Dysentery and Diarrhoea.	Plague.	Respiratory Diseases.
1912 ..	7,090,991 {	407,769 1·71	89,357 ·37	3,936,085 16·49	292,216 1·22	263,037 1·10	247,736 1·04
1913 ..	6,845,018 {	294,815 1·24	98,155 ·41	3,983,112 16·71	246,578 1·03	198,456 0·83	237,229 1·00
1914 ..	7,155,771 {	280,730 1·18	76,590 ·32	4,092,345 17·16	278,225 1·17	266,588 1·12	261,149 1·09
1915 ..	7,142,412 {	404,472 1·70	83,282 ·35	3,990,287 16·73	261,800 1·10	380,501 1·60	257,721 1·08
1916 ..	6,940,436 {	288,047 1·21	60,642 ·25	4,085,784 17·13	249,381 1·04	205,527 ·86	286,247 1·20
1917 ..	7,803,832 {	267,002 1·12	62,277 ·26	4,555,221 19·10	260,984 1·10	437,036 1·83	316,821 1·33

Cholera.—To cholera in 1917 were ascribed 267,002 deaths which represent a death rate of 1'12 as compared with 1'21 in the previous year. Bihar and Orissa suffered more heavily from this disease than any other administration and was responsible for 41 per cent. of the all-India cholera mortality, reporting a cholera death rate of 3'1. Assam, 1'81, and Madras, 1'5, were the only other administrations in which the cholera death rate was in excess of unity. The North-West Frontier Province was altogether free from the disease and the incidence was extremely low in Upper Burma, the Central Provinces, Delhi and the Punjab.

Small-pox.—Small-pox was not an important cause of mortality in 1917. The 62,277 deaths ascribed to it are equivalent to a mortality rate of 0'26 as compared with 0'25 in 1916. More than half the small-pox deaths were reported from the Madras Presidency where the disease caused a death rate of 0'9. The two small provinces of Coorg and Ajmer-Merwara suffered relatively very severely, returning small-pox death rates of 3'23 and 2'54.

Plague.—437,036 deaths were attributed to plague in 1917, equivalent to a death rate of 1'83 as compared with 0'86 in the previous year. The four most severe epidemics, with

the number of deaths recorded in each, were experienced in 1904-05, 1,328,249; 1906-07, 1,286,513; 1903-04, 1,138,451 and 1917-18, 820,292. The two mildest outbreaks were those of 1898-99 and 1908-09 when the total plague deaths amounted to only 119,045 and 126,442, respectively.

Fevers.—'Fevvers' were the cause in 1917 of 4½ million deaths or more than 58 per cent. of the total mortality from all causes. The 'fever' death rate for India as a whole was 19'10 as compared with 17'13 in 1916 and 16'73 in 1915. The proportion of total deaths ascribed to 'fever' was comparatively low in Madras 31 per cent., Burma 32 per cent. and Bombay 37 per cent. Ajmer-Merwara returned the extremely high fever death rate of 68'41: it is probable that a considerable proportion of these deaths should have been attributed to plague.

Dysentery and Diarrhœa.—A death rate of 1'09 was ascribed to dysentery and diarrhœa in 1917 as compared with 1'04 in 1916. Of the major provinces Central Provinces and Berar, 2'55, United Provinces, 1'99, Bombay, 1'85, and Lower Burma, 1 08, alone reported dysentery and diarrhœa death rates in excess of unity.

MEDICAL INSTITUTIONS.

Hospitals, Dispensaries, &c.—There were 3,051 of these institutions in existence at the end of 1916; during 1917 the number decreased by 60, giving a total at the end of 1917 of 2,991. This decrease is largely accounted for by the demand for subordinate personnel necessitated by the War. The necessity for more of these institutions is felt in almost every part of India. In spite of the decrease in the number of dispensaries, there has been a greatly increased number of in-patients and out-patients, and the total number of patients treated has risen up from 34,454,775 in 1916 to 35,588,432 in 1917. The number of operations has fallen from 1,376,504 in 1916 to 1,371,536 in 1917, a decrease of 4,968.

Medical Colleges.—There are five medical colleges (Bombay, Madras, Calcutta, Lahore and Lucknow), the students in which numbered in 1916, 2,730 including a few women. There are also 15 medical schools, the students in which numbered 2,936. There is an X-ray institution at Dehra-Dun where a class of instruction was attended by 20 students. Branch installations opened at Delhi and Simla are obtaining a large number of patients.

Pasteur Institutes.—There were Pasteur Institutes for anti-rabic treatment at Kasauli (Punjab), Coonoor (Madras), Shillong (Assam) and Rangoon (Burma). In these four institutes 8,632 patients were treated during the year.

Lunatic Asylums.—The treatment of lunatics at asylums prevails on a comparatively small scale; but the asylum population is steadily increasing. The number of asylums in 1917 was 22. The number of patients admitted was 2,617 as against 2,529 in 1916. The total asylum population of the year was 9,793.

Leper Asylums.—There are many leper asylums among which may be mentioned the Madras Government Leper Asylum, the Matunga Leper Home, Bombay, the Trivandrum State Leper Asylum and the Calcutta Leper Asylum. There are also many asylums or homes, frequently under some sort of Government supervision, including about 50 asylums of the Mission to Lepers.

The Tropical Diseases.

This account of the chief tropical diseases was written by Lt.-Col. E. F. Gordon Tucker, I.M.S., of Grant Medical College :—

If the principal scourges of the European in the tropics, namely, malaria, dysentery, and typhoid, could be removed, there would still remain the strain of climate as a source of disease and a cause of deteriorated health, not amounting for a time to actual illness, but eventually showing its effects in lessened resistance to the wear and tear of life, premature senility of the tissues, and diminished fertility. This results mainly from the transfer to a hot climate of an individual whose heat-regulating mechanism has previously adapted itself to conditions where the body temperature has to be maintained some 40° above that of the surrounding air. On arrival in a country where the temperature of the air is perhaps the same as that of the living tissues, it is obvious that there must be a sudden and violent disturbance of such mechanism. This mechanism is very complex and exists for the purpose of striking a balance between the heat formed by the changes in the tissues, and the heat lost from the lungs and by radiation from the surface of the skin. But beyond this there is no doubt a regulation of the temperature dependent in some way on the normal working of the central nervous system, as is shown by the remarkable alteration which may take place in the temperature of parts of the body when the brain has been subjected to some gross lesion.

In the tropics the amount of carbonic acid given off by the lungs is reduced about twenty per cent., the number of respirations per minute is reduced, and there is lessened activity of the lungs. This shows that there is less tissue change (or combustion) going on in the tissues, that is to say, diminished heat-production. The same is shown in the diminished amount of work done by the kidneys. As regards heat-loss, this is almost entirely effected through the skin, 70 per cent. of the heat of the body in temperate climates going off by radiation and conduction, and 15 per cent. by evaporation. When however the temperature of the tropical atmosphere rises, the loss by radiation falls to nothing, and all the heat has to be dissipated by evaporation from the surface. Consequently, practically all the work of losing heat, which strikes the balance with the heat production and maintains the body at a normal temperature, falls upon the sweat glands which are therefore in a state of continued and abnormal activity. In hot dry atmospheres the water evaporates as soon as formed, but in conditions of heat with great humidity, such as obtain during the worst months of the year in Calcutta and Bombay, the skin is kept continually moist by trickling beads of perspiration. Herein lies the comfort and healthiness of the punkah which removes excessive moisture. But it is obvious that in order to keep the temperature of the body normal there must be increased flow of blood to the surface of the body, a state quite different from the conditions under which the organs of the European have been trained. This favours those sudden chills to which Europeans are so sub-

ject, and acts prejudicially to the working of the internal organs, especially those subserving digestion. A blast of cold air coming on the congested skin in the early hours of the morning must chill the surface, causing a sudden contraction of the cutaneous vessels, and tending to produce a rapid flux of blood to the deeper parts, inducing a congestion of the mucous membrane of the bowels, and from that results the "morning diarrhoea" which is occasionally severe and exhausting. Such a state of affairs may become chronic, and so lead up to one of the climatic diarrhoeas which are a frequent cause of invaliding. Moreover a sudden congestion of the liver and spleen in a person who has had malaria, may be followed by a malarial hepatitis or splenitis, and repeated attacks of these conditions may result in permanent enlargement of these organs; or at any rate, in the case of the stomach and liver, to derangement of function and so to chronic dyspepsia or insufficient manufacture of bile.

Again, the chronic hyperæmia of the skin favours the development of fungi and microbes. Hence the existence of ringworm of various kinds from which Europeans frequently suffer. There are microbes which, even in temperate climates, are found within the layers of the skin or on the surface. On account of the chronic congestion and moisture of the skin in tropical climates these microbes not only become abundant but virulent, and hence the BOILS which are often a serious affliction in the hot months. We frequently come across most distressing cases where the patient is covered from head to foot with them. When the boil comes to a head and softens it is easy to afford relief by opening each, and so relieving tension, but the worst kind is the "blind boil" which forms as a hard red mass, intensely painful and not coming to a head, and here an incision gives little relief. Until lately these cases were very unsatisfactory to treat, and patients would recover after weeks of pain and much reduced in health. Fortunately we have in the vaccine treatment a most successful method, the vaccine used being either a stock one and generally acting like magic: or, in a small percentage of cases requiring to be made from the boils themselves. In still other cases the infection of the skin causes the formation of CARBUNCLES, which are more serious but require treatment on the same lines.

Another more common condition resulting from the congestion of the skin is PRICKLY HEAT. This results from acute inflammation about the sweat glands and distention of their orifices, producing red papules and little vesicles, the site of intense itching. The trouble is believed to result from the proliferation of a particular microbe in the skin, which alters the reaction of the perspiration. Be this as it may, inoculation of the skin is likely to take place through scratching, and so to the formation of boils. In some cases the skin is so intensely inflamed that the region of the shoulders and neck feels like leather, or the surface gives the impression of sand-paper. It is a serious condition in young infants, as

the irritation prevents sleep, interferes with digestion and so promotes diarrhoea, so that this simple malady may be the starting point of a dangerous illness. Flannel next to the skin should be avoided in the hot weather as it is so liable to start the irritation. A good lotion consists of two teaspoonfuls of Eau-de-cologne in ten ounces of a 1 in 2000 solution of perchloride of mercury, dabbed on the skin and allowed to dry: followed by dusting with equal parts of boric acid powder and talc.

To avoid the heat the European flies to the punkah. The electric punkah has been one of the greatest blessings introduced during recent years into Indian towns as its use insures a good night's rest in place of the weary hours of sleeplessness which formerly wore out the temper and the mental energy of the European during the hottest months. Still this blessing is not without its attendant dangers. Most common are attacks of muscular rheumatism, sudden internal chills causing diarrhoea, attacks of colic, ordinary nasal catarrh, and sometimes bronchitis or pneumonia. The electric punkah does away with the mosquito curtain, which does not conduce to the free circulation of air, and gives good ventilation in its place.

Finally, we have the effects of a continued high temperature on the working of the nervous system. As has been remarked by the late Lt.-Col. Crombie, I.M.S., (in a valuable paper on "The measure of physical fitness for life in the Tropics," to which the writer is much indebted). "In the tropics there is going on continually and unconsciously a tax on the nervous system which is absent in temperate climates. The nervous system, especially those parts of it which regulate the temperature of the body, are always on the strain, and the result is that in time it suffers from more or less exhaustion." The mean temperature of a European in India is always about half a degree higher than it is in a temperate climate, and it may be raised to 99° or 100° after severe bodily exertion. When, under the strain of a severe hot moist and sultry season, the heat-centre gives out, or as it is said is "inhibited," we have all the serious phenomena of HEART STROKE. But in the less marked but long

drawn out process of nervous exhaustion we have the common tropical effect of deficient mental energy, generally commencing with unnatural drowsiness or loss of appetite and a yearning for stimulants, which culminate in that lowering of nerve potential which we know so well as NEURASTHENIA. This nervous disturbance due to climate is likely to be most marked, as Crombie points out, in two classes of persons, namely those who suffer from obesity, and those who are members of families which may be designated as "neuropathic," that is whose nervous systems are naturally unstable. To these may be added persons with naturally defective digestion and those who have a predisposition to gout.

To sum up, it will be seen that the effects of long residence in the tropics are real and permanent, not only in the direction of lowered bodily health, but in undue wear of the nervous system, which may not only be apparent during active service in duties involving strain, anxiety or responsibility, but also after retirement; so that the chances of longevity of the retired Indian official are not up to the normal, and the "extra" which the Insurance Office puts on such lives is not only to cover the risks incidental to life in the tropics, but also the diminished vitality of those who have survived to enjoy their pension and ease.

But there are other Indian risks, and these are most likely to affect travellers, due to the effects of heat on food. Microbes multiply with profusion in milk, and decomposition is liable to occur in meat within a very short time after killing. Milk should always be boiled; and owing to the dirt in railway dining-rooms, and in many hotels, and the carelessness of the lower type of native servant employed therein, it would be better to rely on tinned milk or on a supply of Horlick's milk tablets, when travelling long journeys by rail and in the smaller towns. Beef should never be eaten underdone, as it is a prolific source of tapeworm in India. There is also liability to contamination of food by flies and dust. Indian cooks, though among the best, have little regard for sanitation, and consequently the state of the cook-house should be carefully supervised.

MALARIA.

Attacks of malaria, dysentery, and enteric represent the principal risks to the European travelling in India. Malaria is the commonest cause of fever in the tropics and subtropics, but the risks therefrom have been greatly diminished by our complete knowledge of its causation which now permits an intelligent prophylaxis, that is, taking adequate precautions against infection. The connection of certain kinds of fever with marshy soils has been recognised from ancient times, whence its old name of paludism; and the word "malaria" itself implies the belief in the existence of an emanation of poisonous air from the water-logged ground. It is now realised that the poison is conveyed solely by mosquitoes, and by the anopheline species. There are only a few of the many anophelines which carry

malaria, but all are to be regarded as dangerous.

The parasite of malaria is a delicate jelly-like body which invades the red cells of the blood, and lives at their expense. It has two life-cycles, one within the blood of the human host (endogenous and sexual), the other in the stomach and tissues of the mosquito (exogenous and sexual). But the first part of the sexual cycle is prepared for in the blood of the human host.

If the blood of a patient be taken about an hour before the occurrence of the "rigor," (the shivering-fit which marks the commencement of the attack), and examined in a thin film under a high power of the microscope, some of the red corpuscles will be found to contain bodies composed of delicate proto-

plasm showing minute granules of dark pigment in their substance. These bodies are the parasites. The granules represent the result of the destruction by the parasite of the red colouring-matter of the blood-cell. The latter consequently appears paler than natural and is enlarged. In the parasite of the so-called benign tertian fever, if the blood be again examined when the rigor is commencing, the little mass of jelly is found to have divided into from twelve to twenty minute spheres all held together by the remains of the degenerated red cell, and with minute masses of pigment in the centre. Later the group of spherules has burst through the envelope that held them, and has appeared free in the blood-fluid. Many of these free spherules are attacked and absorbed by the phagocytes, but those which escape destruction effect their entrance into other red blood cells and go through the same process of sexual division, taking forty-eight hours for the process. On the time taken for this cycle to occur depends the periodicity of the fever, the attack appearing every third day, whence the name tertian fever. Another variety of malarial parasite, not very common in India, takes seventy-two hours to complete its cycle, hence called the "quartan" variety.

There is also a third kind of parasite called the "malignant tertian," called by the Italians the *aestivum*-autumnal parasite, which also takes forty-eight hours to go through its cycle, but which gives rise to a more irregular fever, and has more pernicious effects on the system and is also liable to produce severe nervous symptoms, such as unconsciousness, often ending in death with very high fever. Each kind of parasite has its special characteristics which can be observed by microscopical examination. Consequently expert examination of the blood is always advisable in cases of fever, not only to show that malaria is present, but also to distinguish the particular kind which is causing the trouble.

Within the blood there also appears the first stage of the sexual life of the parasite in the shape of male and female elements, which result from some of the parasites which do not undergo the usual segmentation described above, and which exist for the purpose of allowing further development in the non-human host, which in the case of this particular parasite is the mosquito. These sexual elements are especially in evidence in the blood of cases of the pernicious variety of malaria, in the form of crescentic bodies which obtain considerable protection from the phagocytes, and many therefore persist for some time in such blood. "Crescents" appear only in malignant fevers, and persons who harbour them are of course a danger to the community, inasmuch as the mosquitoes of the locality are infected from them, thus rendering such village or street unhealthy from malaria.

The sexual elements of the malarial parasites when taken into the stomach of the mosquito which sucks up the blood of its victim, undergo certain changes, the male element extruding flagellate or hair-like processes which fertilise the female. The latter thereupon changes into a body endowed with the

property of locomotion, which makes its way into the coats of the stomach of the insect, and becomes divided up into a vast number of minute cysts, each of the latter becoming packed with minute rod-like bodies. The cysts rupture into the body-cavity of the mosquito, and the rods, thereby set free, become collected within the substance of the salivary glands, and ultimately make their way to the base of the proboscis. On such an infected mosquito pushing its proboscis into the human skin when it wishes to draw blood some of the rods are injected into the blood stream. They then enter red blood corpuscles and go through the various cycles described above.

From three to five days, or as long as a fortnight, after being bitten by such a mosquito the patient has an attack of fever, sometimes preceded by pains in the limbs, headache, and malaise. This is soon succeeded by a feeling of intense chill, perhaps associated with vomiting. The skin becomes cold and blue the shivering is excessive and prolonged, constituting the "rigor" stage. In this state the patient is in great distress, and obtains little sense of relief from the blankets which he heaps up over himself. Although the surface of the body is very cold, the temperature, taken in the arm-pit or mouth, shows a rise to 103° or higher. In a quarter of an hour or more the "hot stage" comes on, the face becoming flushed, the surface of the body red and warm, the small quick pulse becoming full and bounding, and perhaps the patient complains of throbbing headache. He remains thus for a few hours and then occurs the "sweating stage," perspiration breaking out about the head and face, and soon extending to the whole body. Great relief is experienced when this is entered on, and is likely to be followed by a refreshing sleep. During the paroxysm the spleen is often enlarged and may be the seat of considerable pain. There is also often troublesome cough from a concomitant bronchitis. With repeated attacks the enlargement of the spleen is liable to become permanent, the organ coming to form a large heavy tumour with special characteristics, the so-called "ague cake," which is common among the children of malarious districts. Europeans who suffer from severe or repeated malaria are likely to suffer from permanent ill-health in the shape of anæmia, dyspepsia; or easily-induced mental fatigue.

Treatment.

The traveller in India should endeavour to guard himself against the bites of mosquitoes. This can be done to a great extent by the use of mosquito curtains, the mosquito seeking the blood of its victim mainly at night. But when travelling by train protection is difficult. There are some odours which mosquitoes appear to dislike. Sprinkling the pillows with lavender water is sometimes efficacious, or smearing the hands with lemon-grass oil. Camps should not be pitched in the neighbourhood of native villages, if it can be avoided. Travellers should provide themselves with thermometer and a supply of quinine tablets.

During the cold stage the patient should be well covered, and hot fluids administered, unless vomiting is present. Quinine should not be taken in this stage as it increases the distress. A diaphoretic, or sweating mixture, should be administered every two or three hours until the skin becomes moist, and throughout the hot stage: this soon gives relief, and when the stage of perspiration has been reached, the grains of quinine should be given, and repeated in five grain doses every six hours until the temperature becomes normal. Thereafter the drug should be continued for a few days in doses of five grains twice a day. This is calculated to ward off a second attack, or, at any rate, to reduce its severity and prevent a third. If there is vomiting, quinine tabloids are not likely to be digested and absorbed; in such cases the drug should be given in a mixture dissolved in a dilute acid. The advantage of quinine tabloids is that the unpleasant taste is avoided.

There are some severe continuous malarial fevers which appear to resist the action of quinine. These are the pernicious

tertian fevers, which so often cause difficulty in diagnosis inasmuch as for a few days they may suggest enteric fever, especially to those inexperienced in tropical diseases. In such cases large doses of quinine are required, the skin being kept moist meanwhile by a diaphoretic mixture. Some of these fevers last for a week or longer, but the majority of them yield to quinine in three or four days. It is in such that an early examination of the blood is so useful. In certain cases of profound malarial poisoning or where, for any reason, administration does not appear to be acting when had to be given by the mouth, recourse must be taken to the subcutaneous injection of quinine into the tissues. This should always be done by a skilful physician, and with special precautions, as in some cases of tetanus have occurred after quinine injections taken from stock solutions, even when apparently given with every care. The "vaporoles" prepared by Messrs. Burroughs Wellcome & Co., which consist of little glass capsules containing preparations of the drug dissolved in sterile and non-irritating fluid, appear to be absolutely devoid of risk and are very efficacious.

TYPHOID FEVER.

By Typhoid or Enteric Fever is meant a continued fever, lasting for three weeks or longer, due to the entrance of the bacillus into the intestinal canal, which not only produces serious abdominal trouble but also produces symptoms referable to a general infection of the blood by the bacillus and the poison which it engenders. Formerly the scourge of the British Army in India, it has been reduced to a very low point, through the successful use of Sir Almroth Wright's vaccine. Continuous attention to the sanitary condition of the soldiers' quarters, improvement of water supplies, and skilful medical treatment.

"Paratyphoid" is a term applied to certain fevers which have all the characters of typhoid, but with a rather lower mortality, and which are due to infection by bacilli which are closely related to the typhoid bacillus.

The fact that typhoid more frequently attacks the new arrivals to the tropics renders this disease one of the risks which tourists have to face, but this can be minimised by knowledge of the manner in which the typhoid bacillus affects an entrance into the system.

Typhoid Fever has now been shown to be a common affection among Indians, contrary to what was held some fifteen years ago. In Bengal and the Punjab, according to Leonard Rogers (*Fevers in the Tropics*), the maximum of cases for all classes occurs during the hot months, while the maximum for Bombay is in the rainy season. But taking the European cases only he finds that the largest number of cases falls within the dry, cold and hot seasons, and considers that this is due to the European being most frequently infected through contaminated dust, this class of person

paying greater attention now-a-days to the condition of the water which he drinks: unlike the Indian who will drink water out of the nearest tap.

As is well known, infection of typhoid is most commonly produced by contamination of drinking water. Great care is therefore necessary in boiling and filtering drinking water and in protecting the vessels in which it is kept from contamination by dust. In the neighbourhood of all native villages the soil is laden with animal dejecta which, of course, is very likely to be associated with disease-producing microbes. Hence infection of the food in cook-houses and shops is easily produced by the wind carrying the dust from latrines and other foul areas. Uncooked vegetables produced from gardens watered by sewage-containing fluid are also very dangerous, and should be avoided by the Indian traveller. Lastly oysters taken from estuaries which receive rivers laden with organic matter from the villages on the banks are believed to afford special protection to the typhoid bacillus, and when eaten raw are dangerous.

In many cases the onset of the disease is sudden, with headache, shivering and vomiting, but in a little less than half the onset is insidious, the patient being out of sorts, slightly feverish, perhaps with occasional looseness of the bowels, loss of appetite and a little sickness. He ultimately takes to his bed, generally dating the commencement of his illness from this event, and there forthwith begins a period of at least three weeks of anxiety for his friends and relatives, inasmuch as enteric fever, as seen among Europeans in India, is characterised by its greater severity and longer duration. The temperature rises gradually day by day during the first week, remains at a fairly constant high level during the second, becomes

Irregular with daily remissions during the third, and in the majority of cases is succeeded by a period of convalescence, during the first part of which the greatest care in dealing with the patient is required. The bacillus produces its most important effects on the lower portion of the small intestine, certain glandular structures in the wall of the bowel becoming inflamed, enlarged, and finally ulcerated. It is on the formation of these intestinal ulcers that many of the worst complications depend. The ulcerative process favours, first a looseness of the bowels, later an exhausting diarrhoea. Moreover the destruction of some of the coats of the bowel may open up an adjacent blood vessel and produce alarming or even fatal hemorrhage. And again the whole thickness of the bowel may be perforated, causing death from collapse and peritonitis. This is the danger which the physician has in view throughout the case. It can only be guarded against by the most careful nursing and attention to the dietary. Other dangers are bronchitis and failure of the heart, especially during the third week. During the stage of convalescence the same care has to be taken with the dietary as the ulcers are undergoing healing, and an error might lead to the rupture of one of them when all danger may well be expected to have passed. Finally, owing to the depressing effects of climate, convalescence is often attended with prolonged mental depression.

In the matter of treatment it is absolutely essential that the patient should have the benefit of skilled nursing. Fortunately highly-trained European nurses can now be obtained from any populous centre, though occasions arise when the demand exceeds the supply. If possible two nurses should be obtained for day and night duty respectively. Unless it is absolutely necessary to remove him, the patient should be nursed where he falls ill and not sent long distances by train. At the most he should travel to the nearest large town where there is a Civil Surgeon. Treatment

mainly consists in keeping the fever within bounds, and thereby sparing the strain on the heart which is great during the three weeks of continued fever. This is effected in great part by the system of hydrotherapy, that is, treating the patient by continued tepid baths or by frequent sponging with tepid water to which a little toilet vinegar should be added. There is no special drug which is of any use in aborting the fever, but this does not mean that drugs are of no use in typhoid. On the contrary the complications, which are many, will be detected as they arise by the careful physician, and there is no disease which tries more than this the skill of the doctor and the care of the nurse, who will frequently bring to convalescence what seems to be an almost hopeless case. Abdominal distension, for instance, is a frequent and serious complication in Indian typhoid, and should be treated as soon as detected. It results partly from the decomposition of the intestinal contents, partly from loss of the muscular tone of the bowel. It hinders the respiration and the action of the heart, and favours the occurrence of perforation. Diet consists almost entirely of milk, either pure, diluted with barley water or whey, or as a jelly.

Lastly a word should be said about the importance of typhoid inoculation to those intending to travel in India or the tropics. It is better to have Wright's prophylactic vaccine injected before leaving home, but if this is not done, it should be submitted to on arrival in Bombay. In the majority of cases the only discomfort resulting is a little passing tenderness at the site of inoculation: in some cases there are a few hours of fever: and in the worst the patient feels out-of-sorts for twenty-four hours. The inoculation (with a larger dose) should be repeated on the eighth day. Attention to this small precaution as a routine measure would obviate most of the catastrophes which we witness on occasions among "globe-trotters" who have come to the country for pleasure or health.

DYSENTERY.

The term Dysentery is applied to several forms of infective inflammation of the large bowel, in which the principal symptoms are griping, abdominal pain, frequent straining, and the passage of a large number of evacuations characterised by the presence of blood and mucus. The changes which take place occur in the mucous membrane of the large bowel, and are first an acute catarrh succeeded by ulceration more or less extensive, and sometimes going on to gangrene.

The disease is endemic in India; and is in fact common in Eastern countries, and in Egypt. It is liable to arise in epidemic form especially among armies in the field. It is caused by a contaminated water supply, and by the infection of food by dust and flies. Dysentery is probably caused by several varieties of micro-organisms but for all practical purposes may be said to be divided into two great groups, one due to the amœba of dysen-

tery, and the other caused by a bacillus described by Shiga and known as bacillary dysentery. The latter form is more common in Japan and in the north-eastern side of the Indian peninsula; the amœbic form being that most commonly seen in the Bombay Presidency. The bacillary form is characterised by the presence of a very large number of evacuations perhaps as many as a hundred or even more in the twenty-four hours. In the amœbic form there are seldom more than twenty evacuations in the day, and there is less fever and general depression than in the bacillary variety. In the amœbic form there is greater tendency to thickening of the bowel wall, and to the dangerous complication or sequel of abscess of the liver.

After a few days of severe illness should the patient recover there is a danger that the disease may become chronic, a condition which is associated with emaciation and profound

weakness. The chronic form is also more likely to eventuate from the amœbic type.

The frequency with which it attacks Europeans in India may be judged from the admissions of the European soldiers into hospital, the figures of admissions for each of the years 1910 and 1911 being 7·7 per thousand of strength.

The treatment of the bacillary form with an anti-dysenteric serum has had good results. In the amœbic form most Indian physicians still rely, and rightly so, on the use of ipecacuanha. This has to be given with particular precautions and with a previous dose of opium

to diminish the liability to vomiting. Recently, thanks to the work of Leonard Rogers, a valuable drug has been placed in our hands, in the form of emetine, an alkaloid derived from the ipecacuanha root; and which when injected into the deeper layers of the skin, gives all the good results of ipecacuanha without its unpleasant effects. It is of special value in the case of children in whom acute dysentery is a very serious disease. We have hereby obtained one more efficient weapon in the contest with one of the common diseases of India.

ABSCESS OF THE LIVER.

There are several varieties and causes of abscess of the liver but the term is applied in India to the single abscess which frequently forms as the result of amœbic dysentery, the latter generally preceding but sometimes being concomitant with the formation of the abscess. It is one of the scourges of the European in India, and is especially to be dreaded on account of the high mortality. Taking all the cases together, including the acute and chronic and all classes of the community, the death rate is about sixty per cent., but this will probably be reduced by recent improvements in the methods of diagnosis and treatment. The latest annual report of the Sanitary Commissioner with the Government of India states that next to enteric fever, hepatic abscess is the most frequent cause of death among European troops, but the admissions and deaths on account of it have decreased greatly during recent years. The report also notes that the decrease in the number of cases of liver abscess is coincident with an equally steady fall in the number of admissions to hospital for alcoholism.

The disease is most liable to attack those who, in addition to having had an attack of dysentery, have indulged, not necessarily to excess, in alcohol and general good living, and are at the same time somewhat sluggish in their habits. It is often preceded by continued fever, malaise, dyspepsia, and more or less uneasiness in the liver region, or the latter organ may be acutely enlarged and very tender. In many cases the exact diagnosis is often a

matter of anxiety, but greater precision is now possible as we have come to recognise what Rogers has called the presuppurative stage of amœbic hepatitis, which is very amenable to treatment by ipecacuanha or injections of emetine. The use of this method will often prevent the case going on to the dangerous condition of abscess, which when it has once definitely formed can only be dealt with by prompt operation, which in itself has a high mortality. Further aid is now obtained by special examination of the blood and by the use of the X-rays, which will often clear up a doubtful case.

The abscess generally forms in the right lobe of the liver. Should it form on the left side it is especially liable to rupture into one of the internal organs.

The same complication may eventuate when the abscess forms on the right side. Here the principal point of rupture is into the right lung, the contents of the abscess being suddenly evacuated, in some cases without much warning, and nature thereby effecting a cure. Such a termination however is not desirable as healing will take place quicker by surgical means.

There are some abscesses which are exceedingly insidious, it often happening that patients are sent home with a fever associated with general loss of health and weight, where the existence of a deep seated abscess may not even be suspected; but in which the symptoms of hepatic abscess suddenly occur and clear up the case: or the correct diagnosis may obtrude itself by the sudden rupture as above described.

PLAGUE.

Plague is a disease of very great antiquity; its ravages and symptoms have been described with remarkable accuracy by the old historians, such as Procopius. Not many years ago it appeared to be a disease of historical interest only, but the present pandemic, which commenced about 1894, has made it a subject of the greatest importance to the inhabitants of the British Empire. It was in March 1894 that it first became prominent in Canton, and thereafter it spread to Hongkong, Macao and Pakhoi, and so along the whole of the Southern China Coast. It probably arrived in Bombay in March 1896, but it was not until the end of September that

it became noticeable in that part of the native city known as Mandvi, in which the great grain supplies are collected, and wherein consequently there is an enormous rat population. In October of the same year the presence of the pestilence was officially acknowledged. Everything which the limited knowledge of the subject at that time suggested, was done to check its spread; but, in spite of all efforts, the pestilence spread from the infected city throughout the greater portion of the Peninsula, and while its ravages of late years have not been so terrible as at its first appearance, yet the disease still takes its annual toll of human life, and it has

apparently become one of the endemic diseases of India. According to the official figures, Plague since its appearance has been responsible for more than seven and a half million deaths within the limits of the Indian Empire. These figures should perhaps be increased by about fifteen to twenty per cent., due to defect in the registration of the causes of deaths and also to the fact that the disease often simulates other maladies for which it is likely to be mistaken by an uneducated population.

Plague is an acute infection of the blood by a bacillus which was discovered by Kitasato in Hongkong in 1894. It generally affects its entry by the skin, on which it is deposited by the rat-flea. At the site of deposit a small pustule is occasionally found which soon forms a superficial ulcer. In such cases inflammation and distention of the lymphatics may be noticed running from the neighbourhood of the small and painful ulcer to the nearest group of glands. These will be found to be enlarged and exquisitely tender, the tenderness being out of all proportion to the size of the glandular enlargement and to the amount of local inflammation. This glandular enlargement is called the Bubo, which has given the name to the most common form of the pest—Bubonic Plague.

With the appearance of the Bubo, or even a day or so before it, there is evidence of a general infection of the system, in the shape of extreme prostration, mental confusion, a furred tongue, and fever which is generally high. The pulse is accelerated, and while at the outset, especially in full-blooded muscular adults, it is likely to be full and bounding, there is sooner or later, generally soon, evidence of early failure of the strength of the cardio-vascular system. The pulse becomes quicker, smaller, and the heart sounds feeble. As the case progresses, the primary ulcer will enlarge and become of an angry appearance, the Bubo will also enlarge and the tissues around the inflamed lymphatics will be swollen and œdematous. To this variety the term "cellulo-cutaneous plague" has been applied. The spreading ulcer, which is really a local gangrene, has been described as the plague "carbuncle"; these forming on the skin of those affected were often referred to by old historians as a prominent feature in many ancient epidemics.

These cases however are somewhat uncommon. The usual variety met with is the Acute Bubonic Plague. In this the patient is attacked with fever, and all the general symptoms of an acute infection, and on the first, second or sometimes the third day of the illness the characteristic bubo appears. The common site is among the glands of the groin, for the reason that these glands receive the lymphatics from the lower limbs and from the lower portion of the trunk up to the level of the navel, a larger area than that drained by any other group of glands. Other sites for Bubo formation are the arm-pits, the glands of the neck, those about the angle of the jaw and below the chin, and very rarely the little gland on the inner side and just above the elbow, and the small glands behind the knee joint. In some cases, generally in association with Buboes in the groin, the deep glands of the abdomen can be felt to be enlarged.

These Plague Buboes are of different kinds and it is a matter of some importance in connection with treatment and the outlook as regards recovery, to recognise the type of Bubo present in each particular case. The common variety is the "softening bubo." The enlargement increases somewhat rapidly and the hard swelling gives place to a soft doughy mass around which is a limited amount of serous effusion into the subcutaneous tissues. If the patient lives till the fifth day or thereabouts this bubo will feel like a tightly stuffed pin-cushion, or may give the experienced examiner the signs that the contents are of a fluid nature. On incision, pus and shreds of the disorganised gland will be evacuated, and under suitable treatment the cavity, though large, will heal up within a week or so. When these softening Buboes are allowed to rupture spontaneously a large foul cavity is produced; such are not unfrequently encountered among the poor, who have not received adequate attention during the stress of a plague epidemic.

Another variety of bubo obtains when the glands inflame and harden, the inflammation being so acute that the blood supply of the part is obstructed and the whole of the affected area sloughs out, leaving a large superficial ulcer of a very unpleasant appearance. These buboes are found where the inflamed glands are bound down beneath tense tissues, as in front of the ears and in the region of the groin. To this kind the term "indurated bubo" has been applied. Another variety the "œdematous bubo" occurs in the neck and the arm-pit and in them the serous effusion into the tissues around the glands, present to a less extent in the common type is the essential feature. The whole arm-pit or the side of the neck may be distended by the accumulation of fluid under the skin. It is an extremely distressing kind of bubo, as the pain is great and nearly all the patients die. Also there is a rare kind the "hard late bubo," which appears after about a fortnight in cases simulating typhoid fever, and lastly there are some soft buboes which abort and shrink with the rapid subsidence of the fever—the "shrinking bubo." The fever continues from the outset with slight emissions; it is generally about 103° to 104°, but it may rise to a great height from almost the initial rigor. On the third day the temperature tends to approach the normal, and almost immediately rises again. Should it rise to a point above that of the maximum temperature preceding the remission the outlook is bad; but in cases which are likely to do well it rises to a point which is less than that of the preceding maximum, and after about three days gradually falls to normal, with slight daily oscillations depending on the amount of the suppuration in the buboes and their local condition.

It is to be understood that this disease is of such great virulence to human beings, on account of the early appearance of the plague bacillus in the blood-stream, that there are many instances in which death occurs before the bubo has had time to undergo the changes described above or even to form. The more acute cases are also liable to be a typical in their mode of onset. Some are taken with a wild delirium in which they are likely to attack those about

them: others suffer from vomiting of blood followed by rapid failure of the heart and death: pregnant women miscarry and practically all of them die: and lastly there are cases where the general and local symptoms are slight and yet failure of the heart may suddenly ensue within a few hours of the onset. These so-called "fulminant" cases are generally met with at the commencement of every epidemic: in some of the descriptions of mediæval epidemics they seem to have been in the majority, and it is on account of these that plague epidemics appear so terrible to the occupants of the plague-stricken town. Fortunately, however, there is a large majority of cases which allow some scope for medical skill. The condition of the patient after the full development of the symptoms is always one which gives rise to great anxiety. The mental condition becomes dulled, which, while it mitigates considerably the distress of the sufferer, is nevertheless an indication of the action of the plague poison on the nerve centres. The eyes are suffused and often acutely congested. There may be cough, which is a bad sign as it indicates either a secondary pneumonia or the onset of an acute bronchitis, the direct result of the failure of the heart. If the latter progresses the breathing becomes more rapid, the pulse weak and almost uncountable at the wrist, the skin cold and clammy, and towards the end covered by profuse perspiration: finally, the breathing becomes irregular, and after several long-drawn gasps the patient breathes his last.

In other cases however improvement starts about the fourth day, the temperature gradually falls, and the mind clears: the bubo suppurates in due course and heals up, and the patient passes into a slow convalescence, but which is sometimes retarded by the formation of chronic abscesses, boils, attacks of heart failure or of palpitation: or ulcers of the eyeball with infection of the whole globe and consequent loss of sight. Some recover with permanent mental enfeeblement, or persistent tremors of the limbs with difficulty in speaking with clearness.

Septicaemic Plague.

This term is applied to certain forms of acute plague where buboes do not form, or where there is uniform but slight enlargement of glands in various parts of the body with symp-

toms of a general blood infection. The term is misleading, inasmuch as most cases of acute bubonic plague are really septicaemic from the outset. These cases are either acute, ending fatally about the third day or sooner: or are sub-acute, with symptoms simulating typhoid fever, ending fatally in about a fortnight. In the acute cases large dusky patches of blood-effusions beneath the skin, the so-called plague spots, are sometimes found; and there may be hæmorrhages from the stomach or bowels.

Pneumonic Plague.

In this variety the plague bacillus proliferates in the lung and causes rapid consolidation of large patches of the lung tissue scattered irregularly throughout the organs; with a considerable amount of œdema, so that the lungs are engorged with blood, are large and heavy, and the bronchial tubes filled with reddish frothy fluid which contains the plague bacillus in almost pure culture. The fever is very high and the interference with respiration immediate, and death occurs from the second to the fourth day. A curious fact about pneumonic plague is that one such case is liable to give rise to others of the same type.

Treatment of the Disease.

No serum or antitoxin has so far proved of value in diminishing the mortality of the sick. Much can, however, be done by medical treatment. Absolute rest is required and the patient should not even be allowed to sit up in bed. Drugs which act as heart stimulants are required almost from the outset, and frequently these have to be administered by the skin as well as the mouth. The buboes should be fomented till they soften, and incised as soon as fluid is formed. For the pneumonic condition the administration of oxygen gas gives relief. This can be obtained in India without much difficulty. Careful nursing is essential, and fluid nourishment must be given regularly in an easily assimilable form, and complications have to be met as they arise. As regards prophylaxis by means of Haffkine's Plague prophylactic which is manufactured in enormous quantities at the Bacteriological Government Laboratory at Parel, it may be said that its use gives a threefold chance of escape from attack and a reduction of case mortality by fifty per cent.

DENGUE FEVER.

Dengue fever, otherwise known as Dandy fever or Breakbone fever, is rather common in India and is generally present in the larger towns, but as it appears in manifold forms and various writers describe it differently, its identity is not always recognised; and, therefore, by many medical men is thought to be less common than it really is. On occasions it gives rise to very wide-spread epidemics. In 1902 there was an extensive epidemic on the eastern side of the Indian Peninsula, and quite recently there has been a bad outbreak in Calcutta. It is more common during the rainy season.

The onset is abrupt, with fever, slight sore throat producing cough, rapidity of the pulse,

sometimes a red rash which is so fugitive that it is often overlooked, and intense pain. These pains constitute the patient's chief complaint. They are generally pains in the bones, or in the small of the back, or in some of the joints either large or small. Sometimes there is no complaint of pain in the limbs, but there is intense pain behind the eyes. The fever lasts for three or four days, during which in rare cases there may be further symptoms due to the appearance of a pleurisy or even a pericarditis. Sometimes there is intense shooting pain into the little finger. Though the intensity of the symptoms may give a very serious aspect to the case, yet a fatal issue is almost unknown. After the

four days of intense suffering the fever subsides somewhat abruptly, and at about this time a second rash appears, most marked over the shoulders and neck, and on the backs of the arms, or else an universal rash. It is of a dark red colour, often very like the rash of scarlet fever, or it may be like that of measles. With its appearance the more severe symptoms subside. During convalescence the patient is much depressed, and the pulse remains unduly rapid. Sometimes also pain starts again in one of the joints, or he is crippled by stiffness of the back or of several of the joints. After a shorter or longer period, from two days to ten, a second attack of fever and pain comes on which runs the same course but as a rule less severe and

prolonged; in very rare cases there is a third attack.

There is no drug which will cut short the disease. From its likeness to rheumatism the salicylates are generally used, and perhaps relieve the pains. This drug should be combined with an ordinary fever mixture: large doses of bromide should be given for the headache, and the excruciating pains must be treated with morphia.

It is often impossible to distinguish the malady from influenza until the appearance of the rash.

It is believed that the poison is conveyed by the bites of a mosquito, and that this poison has characters which are analogous to the virus of Yellow Fever.

CHOLERA.

This is one of the most important diseases of India, having been endemic therein for many hundreds of years. It is always present in the country, and sometimes extends over large districts generally from some crowded centre such as the site of a pilgrimage, from which it is dispersed over the country-side by the returning bands of pilgrims. The deaths in British India from this disease in 1911 numbered three hundred and fifty-four thousand and in the following year four hundred and seven thousand. The disease is of special importance to the numerous pilgrims both on going to and returning from Mecca.

It is essentially a water-borne disease and the exciting cause is the "comma bacillus" discovered by Koch, so called from its shape when isolated and stained. The dejecta of a person suffering from the disease, when contaminating the soil, are liable to get washed by the rains into some water-supply, which may become the source of almost unlimited infection. Such contaminated drinking water is rendered innocuous by boiling, or filtration through a Pasteur-Chamberland filter. The importance of Koch's discovery, therefore, lay in the recognition of the fact that the poison was essentially water-borne. It can also be conveyed by flies settling on food.

The disease has an incubation period of from two to seven days. After a premonitory diarrhoea with colicky pains lasting for half a day or longer, the nature of the illness is announced by violent purging and vomiting, the former having the peculiar character of rice-water. The poison may be so intense that death takes place before the purging appears, the so-called "cholera sicca." In the common form collapse is early and marked, the extremities are blue and cold, the skin shrunken, the heart weak, the surface temperature below normal, though the temperature taken in the mouth shows high fever to be present. There is a curious pinched expression of the face with deeply sunken eyes, and the patient endeavours to communicate his wishes or fears in a hoarse whisper. He is further distressed by painful cramps in

the muscles of the calf and abdomen, and there is suppression of the functions of the kidneys. Death generally takes place in this the algid state. Should the patient survive he passes into the stage of reaction, the unfavourable symptoms disappearing and gradually passing into convalescence. In some of these cases which give hopes of recovery there is a relapse, the conditions of the algid state re-appearing and death taking place. It has recently been recognised as a cause of the dissemination of the disease, that patients who have recovered will continue to discharge the bacillus for many weeks.

The prevention of cholera lies in attention to water supplies, and in boiling and filtering as a matter of routine in Indian life. All the discharges from the sick should be treated with disinfectants, and soiled clothing and linen destroyed. People who have to tour in cholera-stricken districts, or who go on shooting excursions, or who find themselves in the midst of a cholera outbreak should undergo inoculation with Haffkine's preventive vaccine. Two inoculations are required, the second being more intense in its effects. The temporary symptoms which may arise after the inoculation are sometimes severe, being always more marked than after inoculation against typhoid, but the protection afforded more than makes up for the temporary inconvenience endured.

During the cholera season the mildest cases of diarrhoea should be brought for treatment to a physician, as such persons are more liable than others to contract the disease.

Treatment mainly resolves itself into meeting the extreme collapse with stimulants and warmth. There is great temptation to administer opium but in some cases this is not unattended with danger, and in others there is no capacity left in the patient for the absorption of drugs administered by the mouth. The mortality has, however, been reduced by the injection of saline fluid into the skin or directly into the veins, and also by the introduction of saline fluid of particular strength into the abdominal cavity,

KALA-AZAR.

This is a slowly progressive disease associated with great enlargement of the spleen and some enlargement of the liver, extreme emaciation, and a fever of a peculiar type characterised by remissions for short periods, and due to infection by a parasite of remarkable characters which have only recently been worked out. It is attended with a very high mortality, about 96 per cent., and has up to the present resisted all methods of treatment, although some patients appear to improve for a time, only in the majority of cases to relapse later.

It is endemic in Assam, from which it has invaded Bengal, and is now often seen in Calcutta. It is also fairly often met with in Madras, though it is said that the cases are imported ones. It is very rarely seen in Bombay, and then only in immigrants from infected localities, though there appears to be a mild endemic centre in Jabalpur in the Central Provinces; so it is likely to be more frequently met with on the western side of India. It has caused great mortality among the coolies on the tea-plantations of Assam, especially among the children; but under the recent measures of prophylaxis which have been put into force since knowledge has been acquired about its real nature and method of spread, the ravages of the disease are likely to be limited. It is very rare among Europeans and then almost entirely among those who have been long in India or who have been born and bred in the country.

Infection seems generally to start in the cold weather. There is fever with rigors, and progressive wasting and loss of energy. The temperature chart is a curious one, the fever showing two remissions during the twenty-four hours. Diarrhoea is common, especially during the later stages of the disease. The

spleen enlarges early and is generally of enormous size producing bulging of the abdomen. A remarkable feature is the tendency to the formation of ulcers, which in many cases, especially in children, takes the form of a gangrenous ulceration of the mouth and cheek. Death usually occurs from some intercurrent inflammatory condition, often pneumonia.

The parasite is found in the spleen and liver during life, and can be obtained by puncture of these organs. As thus obtained it is a minute round body of special characters. In this state it is known as the Leishman-Donovan body from its discoverers. This small body has been cultivated by Leonard Rogers in suitable media and under low temperatures, and found to develop into a flagellated, that is tail-possessing, organism. How this peculiar organism develops outside the human host is not yet completely known. It is certainly a house-infection, which accounts for the manner in which whole families have been swept off, one member after another. Its progress has been stayed by moving families from their infected houses and burning down their former quarters. This, and other facts connected with its spread, have suggested that the agent for conveying the poison from man to man is the common bed-bug, and Patton has succeeded in developing the flagellate stage in this creature when fed on the blood of the sick.

There is a severe form of ulceration of the skin known as "Delhi Boil" from which organisms very similar to the Leishman-Donovan body were obtained many years ago. These bodies have also been cultivated outside the human host and found to develop into a flagellated organism. The two parasites, though closely allied, are nevertheless distinct.

INFLUENZA.

During 1918 a peculiar and exceptionally widespread epidemic of influenza appeared, which affected the inhabitants of practically every continent. This epidemic not only caused, directly or indirectly, a very large number of deaths, which in India alone were computed to exceed five millions, but left behind it a legacy of minor ailments with consequent national debility. The economic effect through the disorganization of trade cannot be estimated but must have been very great. Although previously severe and worldwide epidemics have been known to occur, in none were the spread and mortality so alarming as in the epidemic of 1918. So far as it affected India, the epidemic of the Summer months assumed a mild form of the disease. After an apparent departure it reappeared in a virulent and very fatal form during the Autumn months and then seemingly disappeared at the end of the year. In fact this was not so as small localised epidemics have occurred and sporadic cases have continued throughout 1919.

A report on the outbreak by Major Norman White, I.M.S., Sanitary Commissioner with the Government of India, states that there is no doubt whatever that the virus of influenza is a living germ capable of being transmitted directly from man to man. The nature of this germ is still a matter about which dogmatic assertions are unwarranted. The so-called influenza bacillus was certainly, almost constantly present in the cases investigated during the second severe epidemic wave in India; It does not appear to have been demonstrated so frequently during the early mild stages of the epidemic. Whether the influenza bacillus is the true cause of the disease or merely a constant concomitant is a question that is open to doubt. Recent observations that have been made in France indicate the possibility that the true cause of the disease is in some stage of its life history ultramicroscopic, or in other words a germ so infinitely minute that the highest powers of the microscope are unable to demonstrate it. Be the primary cause of in-

fluenza what it may, the mortality of the recent outbreak was almost entirely due to secondary infections with other disease-producing germs, notably the pneumococcus, the germ which commonly causes pneumonia. The pneumococcus was constantly associated with fatal cases in India. Much of the mortality in England and other European countries was ascribed to secondary infection with a streptococcus—another disease-producing germ. No constant association of germs of this latter class with severe influenza cases was noted in India though its occurrence has been reported, for example for Assam. With regard to the relative incidence of the disease among various classes of the population, our information is at present meagre. Among troops serving in India, the incidence of the disease was greater among British than among Indians, though the Indian mortality rate was very considerably in excess of the British. For British troops the hospital admission rate per thousand of strength was 218.2 for influenza and 3.1 for pneumonia, as compared with 135.6 and 20.2

for Indian troops. The death-rates for British troops were 8.96 for influenza and 0.65 for pneumonia, as compared with 15.21 and 6.18 respectively, for Indian troops. The normal incidence of pneumonia among Indian troops is nearly four times that among British troops. A study of the figures hitherto received indicates that influenza as experienced in India was especially fatal between the ages of 10 and 40, and that females suffered to a somewhat greater degree than males.

Influenza is a disease, which exhibits an intense infectivity and an incubation period which is relatively very short, i.e., from 6 to 48 hours. It is commonly believed that the disease is spread by the infected secretions of the throat and nose of infected persons, finding lodgment in the nose and throat of uninfected people. The commonest means by which this occurs is by coughing and sneezing, especially in confined spaces. Methods of prevention then consist of preventing communication of infection by these channels.

Drug Culture.

Two monographs on the cultivation of drugs in India, by Mr. David Hooper, of the Indian Museum, Calcutta, and by Mr. Puran Singh, of the Indian Forest Department, Dehra Dun, have lately been published. Mr. Hooper, in his paper, states that one-half of the drugs in the British Pharmacopoeia are indigenous to the East Indies, and nearly the whole of the rest could be cultivated or exploited. The following are given as those that could be grown in quantity and as worthy of the attention of cultivators and capitalists:—

Belladonna, most of which is still imported, grows well in the Western Himalayas from Simla to Kashmir, the Indian-grown plant containing 0.4 to 0.45 per cent. of alkaloid.

Digitalis is quite acclimatised on the Nilgiris, growing there without any attention. The Madras Store Department obtains all its requirements from Ootacamund, and the leaf has been found equally active to that grown in England.

Henbane is a native of the temperate Himalayas from 8,000 to 11,000 ft. It was introduced into the Botanic Gardens, Saharanpur, in 1840, and it has been steadily cultivated there up to the present time, and the products supplied to medical depots satisfy the annual demand.

Ipecacuanha has been raised with a small measure of success in the hilly parts of India, and it only requires care and attention to raise it in sufficient amount to make it commercially remunerative.

Jalap-root grows as easily as potatoes in the Nilgiris, and there is no reason why the annual requirements (about 4,000 lbs.) for the Medical Stores of Bengal, Bombay and Madras should not be obtained from Ootacamund.

Mr. Puran Singh discussed the subject in a number of the "Indian Forester in 1914": he states that most of the drugs in the British Pharmacopoeia grow wild in India, and that there is already a large export trade for some of them. He adds, however, that materials collected at

random cannot be expected to fetch full prices, as they seldom come up to standard quality, and he adds: "The few drugs that are not indigenous to India could easily be made to grow in some part or other of this vast land. The great advantage accruing from the systematic cultivation of drugs is that a regular supply of genuine drugs of standard quality is assured. The variation in the quality of wild-grown drugs is sometimes a very serious drawback to finding a profitable market for them. The quality of *Podophyllum Emodi* growing wild in India is an illustration in point. This plant was discovered by Sir George Watt in the year 1888, and now, even after twenty-four years, in which it has been shown to be identical with the American drug that is being employed for pharmaceutical purposes, it still remains unrecognised by the British Pharmacopoeia, which, as explained by the "Chemist and Druggist" some time ago, is solely due to the uncertainty which still exists as to its physiological activity".

Mr. Singh also points out that the Indian consumers of medicine depend mostly on herbs growing wild in the Forests, the more important of these probably numbering at least 1,000. This inland trade is very large; the possibilities in the Punjab alone being put at Rs. 50,00,000. He mentions saffron, liquorice, and salep as products exotic to India, whose cultivation in this country looks full of promise. Mr. Singh suggests that a complete survey be made of the extent of the inland trade in medicinal products found growing wild in Indian forests in order to arrive at the figures of annual consumption, and that the forest areas where the most important drugs grow should be preserved. Inquiries should be instituted as to the best methods of cultivation, and if need be, the means of extending the artificial propagation. It is to provide data to induce the private capitalist to embark on such enterprises that Mr. Singh advocates the formation of some body to go into the matter. He suggests that India is well worthy of attention by those in this country who are interested in extending the culture

of drugs in the British Empire. The Forest Department has already begun the cultivation of Indian podophyllum-root in the Punjab, United Provinces and the North-Western Frontier, and several maunds of dried rhizome are sold annually for local consumption. Mr. Hooper also shows that a start has been made in regard to the cultivation of belladonna, henbane and digitalis. One of the principal difficulties to be overcome is to ensure a ready market, and there is also always the danger of over-production to be considered.

Essential Oils.

SANDALWOOD OIL is, by far the most, important perfumery product of India. The sandalwood tree is a root parasite, obtaining its nourishment from the roots of other trees by means of suckers. It grows best in loose volcanic soil mixed with rocks, and preferably ferruginous in character. Although in rich soil it grows more luxuriantly, less scented wood is formed, and at an altitude of 700 feet it is said to be totally devoid of scent. The best yield of oil is obtained from trees growing at an altitude of 1,500 to 4,000 feet, but the tree requires plenty of room so as to enable it to select vigorous hosts to feed it.

PALMAROSA OIL, also known as Indian geranium or "Turkish geranium oil" is another of the principal perfume products of India. It is derived from the grass, *Cymbopogon Martini*, which is widely distributed in India, where it is known as "Motya." Gingergrass is an oil of inferior quality, possibly derived from older grasses or from a different variety of the same species. Both oils contain geraniol, the proportion in palmarosa being from 75 to 95 per cent. and in gingergrass generally less than 70 per cent. These oils are used in soap, perfumery, and for scenting hair oils and pomades.

LEMONGRASS OIL is derived from *Cymbopogon citratus* and *Cymbopogon flexuosus*. The former is a native of Bengal, and is largely cultivated all over India, but the oil distilled on the Malabar Coast and Cochin is derived principally from *C. flexuosus*.

VETIVER, OR CUS-CUS, is a perennial grass, *Vetivera zizanioides*, found along the Coromandel Coast and in Mysore, Bengal and Burma, in most heavy soil along the banks of rivers. The leaves are practically odourless and only used for thatching and weaving purposes. The roots are used in perfumery and in the manufacture of mats and baskets.

THE MALABAR CARDAMOM, *Elettaria cardamomum*, is the source of the seeds official in the British and other Pharmacopœias. Cardamom oil of commerce is, however, not distilled from this variety on account of the high price, but is obtained almost exclusively from the long cardamom found growing wild and cultivated in Ceylon. The oil is used medicinally as a carminative and is also employed by perfumers in France and America.

COSTUS ROOT (the root of *Saussurea lappa*) is a native of Kashmir, where about 2,000,000 lbs. are collected annually. It is exported in large quantities to China where it is used for incense. It is also used to protect shawls and

clothes from the attacks of insects. Its odour resembles that of orris root.

BLUMEA BALSAMIFERA is the source of the Nagai camphor used in China for ritualistic and medicinal purposes. This shrubby composite is found in the Himalayas and is indigenous to India. It is widely distributed in India and is used by the natives against flies and other insects.

EUCALYPTUS plantations are situated chiefly in the neighbourhood of Ootacamund, Coonoor, and Wellington, at elevations varying from 5,500 to 8,400 feet, the best being at from 7,200 to 8,000 feet. The climate of this region is fairly cool, equable and moist, with a well-distributed rainfall of about 50 to 80 inches; although frosts occur, the winters are mild on the whole, and snow is unknown. The soil, a red clay overlying gneissose rock, is rich and deep in some parts, shallow and poorer in others. A large factory is being built for the distillation of eucalyptus oil at Ootacamund. It is believed there is a considerable future for the undertaking, provided a sufficient supply of the leaves is available.

Manufacture of Quinine.

Government Cinchona plantations were started in India in 1862 from seed introduced by Sir Clements Markham from South America, of which the plant is a native. There are two main centres, Darjeeling and the Nilgiri Hills. In both localities a portion of the area is owned by tea or coffee planters, and the bark they produce is either sold to the Government or exported. Several species of cinchona are cultivated in India: namely, *Cinchona succirubra* (red bark), *C. calisaya* and *ledgeriana* (yellow bark), and *C. officinalis* (crown bark). The commonest species in Darjeeling is *C. ledgeriana*, and in Southern India *C. officinalis*. A hybrid form is also largely grown and yields a good bark. At the Government factories both cinchona febrifuge and quinine are made. Thanks to these factories, practically no quinine is nowadays imported for Government purposes.

THE REPORT OF THE GOVERNMENT CINCHONA plantations and factory in Bengal for 1917-18 stated that the total expenditure of all sorts from 1900-01 to 1917-18 is nearly Rs. 47,00,000; the total revenue Rs. 77,73,700 and the surplus Rs. 30,73,700. In addition to this surplus assets are 2,514 acres Cinchona at Rs. 5,78,057; 3,142 acres afforested at Rs. 2,41,703; factory products in stock Rs. 4,53,532, bark and oil Rs. 40,000, or a total of over 13 lakhs all at cost price. While the financial results may be claimed as satisfactory, still more so is the fact that the Department has so far met the great demand for quinine. During the three years 1915-18 over 192,000 lbs. have been issued, a quantity exceeding the total issues for 22 years from 1887, when quinine was first made in the factory, to 1908. A great part of the extra demand has been for the armies, so that the department can claim, in so far as the supply of quinine has prevented the disablement of large numbers of men by malaria in fever-stricken regions, to have given valuable aid in the war. One of the most

far-reaching measures of modern times for the benefit of the health of the people of India has been Sir George King's system of having quinine, locally produced from cinchona, made up in 7-grain packets and sold (since 1896-7) for a quarter anna (one

farthing) at every post office in India. This scheme has proved a commercial success, and has been of immense benefit to the inhabitants of fever-stricken tracts. In the year 1912-13, 10,694 lbs. of quinine were sold at the post offices.

DRUGS MANUFACTURE COMMITTEE.

In 1918 the Board of Scientific Advice accepted a proposal for the formation of a Drugs Manufacture Committee to investigate the possibilities of the cultivation of medicinal plants in India and the manufacture of drugs from them on a commercial scale. The Government of India acted on this recommendation and appointed a Committee whose primary functions will be to investigate. (1) the possibilities of the cultivation of medicinal plants in India, and (2) the manufacture of drugs from them on a commercial scale.

With regard to (1), the Committee will consider the various lines on which the investigation can best be undertaken, while, in connection with (2), it will consider the present position as regard the manufacture of drugs in India from indigenous products and the Indian requirements of such drugs as have until now been imported from abroad. As soon as experience has proved that any drugs can be manufactured at Government Medical Store Depots at a sufficiently low cost, private enterprise will be invited to undertake its manufacture. It was announced in February 1920, that considerable progress had been made and that several articles which before the war were imported were being manufactured in India.

The Secretary of the Drugs Manufacture Committee should be addressed at the office of the Director-General, Indian Medical Service.

Intoxicating Drugs.

Among the drugs which are of great medicinal value, but of which the misuse has been a source of crime and disease among the people of India, there are, in addition to cocaine, **Opium** (for details of the trade see article on opium) which is the oldest and the best known. A resolution of the Government of India, dated August 19, 1912, adopted the policy of suppressing all public gatherings for the purpose of smoking opium and of prohibiting all manufacture of opium smoking preparations save by an individual of a small quantity for his own private consumption. The form which legislation should take was left to the local Governments, provided that

an assembly of three or more persons for the purpose of smoking opium should be made illegal. In adopting this policy Government distinguished between opium smoking and opium eating. "Opium, said the Resolution, as taken in moderation by the average Indian is eaten either as a mild stimulant, or as a prophylactic against malaria, or for the relief of pain or in the treatment of diabetes. It is in fact a household remedy for many ills, and it is safe to say that as a national habit the eating of opium is less injurious than is the consumption of alcohol in many other countries. Centuries of inherited experience have taught the people of India discretion in the use of the drug, and its misuse is a negligible feature in Indian life. These conclusions were accepted by the Shanghai Commission (of 1909) who, while they recommended the gradual suppression of the practice of opium smoking, refrained from advising the abandonment of the policy of regulation by which the practice of opium eating in the country has hitherto been successfully kept under restraint."

Next to opium and cocaine, the most common drugs are the three **hemp** products which are freely used throughout British India. The Indian hemp is a shrub growing wild in the hills and lower elevations, and cultivated in the plains. The leaves of the wild plants, collected and dried in the sun, constitute **bhang**, a sort of green tea, which is mixed with boiling water and drunk as an infusion. This has an exhilarating effect, followed by a feeling of intoxication. When the female plants are cultivated they exude a resinous juice, which causes the flowering tops to stick together. Collected under these conditions the tops are rolled in the hands or pressed under foot; the first process produces "round ganja," and the second "dat ganja." **Ganja** is a stronger form of hemp than bhang, and is used for smoking. The third form of Indian hemp is **charas**, the resinous secretion of the plant that develops when it is grown at certain altitudes. Large quantities of charas are produced in Chinese Turkestan, and enter India by way of Leh. This is sold over the northern part of the country, and used for smoking purposes.

The Cocaine Traffic.

The form of cocaine chiefly used in India is Cocaine Hydrochloride. This salt forms light shining crystals, with a bitterish taste, and is soluble in half its weight of water. The alkaloid cocaine—of which this is a salt—is obtained from the dried leaves of the Erythroxylon Cocaine which grows in Bolivia, Peru, Java, Brazil and other parts of South America. The leaves are most active when freshly dried and are much used by the Natives as a stimulant. Tea made from them has a taste similar to green tea and is said to be very effectual in keeping people awake. In India the Coca plant seems never to have been cultivated on a commercial scale. It has been grown experimentally in the tea districts of Ceylon, Bengal and Southern India and has been found to produce a good quality and quantity of cocaine. As the plant has not been seriously cultivated and as there is no possibility for the present of the drug being manufactured in India, no restrictions have as yet been placed on its cultivation.

Spread of the habit.—The cocaine traffic in India which seems to be reaching alarming proportion in spite of legislation and strict preventive measures is of comparatively recent growth; though it is impossible to estimate how widespread it was in 1903 when the Bombay High Court for the first time decided that cocaine was a drug included within the definition of an intoxicating drug in the Bombay Abkari Act. Since that date the illegal sale of cocaine in India has largely increased and the various provincial Excise Reports bear witness to the spread of the "Cocaine habit." The consumers of the drug, which is notoriously harmful, are to be found in all classes of society and in Burma even school children are reported to be its victims; but in India as in Paris the drug is mostly used by prostitutes or by men as an aphrodisiac. The habit has spread chiefly to those classes which are prohibited by religion or caste rules from partaking of liquor and the well known Indian intoxicating drugs.

Imports from Europe.—Cocaine and its allied drugs are not manufactured in India, but are imported from Germany, France, England and Italy. Most of the drug which is smuggled into India, comes from Germany and bears the mark of the well-known house of E. Merck, Darmstadt. This firm issues cocaine in flat packets of various sizes ranging from 1 to 3 ounces which are easily packed away with other articles and greatly favour the methods of smugglers. Owing to its strength and purity cocaine eaters prefer this brand to any other in the market. Restrictions on export from Europe have been under consideration for some time but as yet no international scheme devised to that end has been agreed upon.

Smuggling.—So far as the cases already detected show, the persons who smuggle the drug by sea from Europe and places outside India, into India, are chiefly sailors, stewards, firemen and sometimes engineers and officers of the Austrian Lloyd and Florio Rubattino S. S. Companies. The ports through which cocaine enters India are Bombay, Karachi, Calcutta, Madras, Marmagao and Pondicherry. The main inland distributing centres are Delhi, Lucknow, Meerut, Lahore, Mooltan, Surat and Ahmedabad. Delhi especially is notorious

for the cocaine trade. Great ingenuity is employed in smuggling cocaine through the Custom houses. It is packed in parcels of newspapers, books, toys and piece-goods and in trunks which have secret compartments. The retail trade in the towns is very cunningly organized and controlled. In addition to the actual retailers, there is a whole army of watchmen and patrols whose duty is to shadow the Excise and Police Officials and give the alarm when a raid is contemplated. Owing to the war and the consequent diminution of supplies the cocaine hawking trade has practically disappeared in Bombay. Since the commencement of the war several cases of importation of Japanese cocaine have been detected, the importers being Chinese and Japanese sailors. Chinese opium smugglers bring cocaine from Japan here to exchange it for Indian opium, which is smuggled into China. Most of the cocaine seized bears the mark "Sanscido & Co., Kobe." In 1917-18 the largest seizures made were one of 8,670 grains by the Excise Department and one of 8,750 grains by the Customs Department.

Price.—The amount seized is either given to Hospitals in India or destroyed. It is no longer possible to buy cocaine from any betelnut seller as it was ten years ago, but scores of cases in the Police Courts show that the retail trade thrives, though to a diminished extent, in Bombay. High profits ensure the continuance of the trade. At present the English quotation varies from 36 to 40 shillings per oz. and the price as sold by licensed chemists in India varies from Rs 27 to Rs. 31 per oz. Owing to the war and the consequent stoppage of illicit importations from Austria and Germany it is not possible to buy the smuggled drug from the wholesale dealers for less than Rs. 100 to 120 per ounce and when sold by the grain the price realized varies from Rs. 400 to 425 per ounce. These profits are further enhanced by adulteration with phenacetin and inferior quinine.

The law in regard to Cocaine.—This varies in different provinces. A summary of the law in Bombay is as follows: No cocaine can be imported except by a licensed dealer and importation by means of the post is entirely prohibited. The sale, possession, transport and export of cocaine are prohibited except under a license or permit from the Collector of the District. A duly qualified and licensed Medical practitioner is allowed to transport or remove 20 grains in the exercise of his profession; and as far as 6 grains may be possessed by any person if covered by a *bona fide* prescription from a duly qualified Medical practitioner. The maximum punishment for illegal sale, possession, transport, etc., under Act V of 1878 as amended by Act XII of 1912 is as follows: Imprisonment for a term which may extend to one year or fine which may extend to Rs. 2,000 or both and on any subsequent conviction imprisonment for a term which may extend to 2 years or fine which may extend to Rs. 4,000 or both. The law in Bombay has been further amended so as to enable security to be taken from persons who have been convicted of cocaine offences. The new Act also contains a section for the punishment of house owners who let their houses to habitual cocaine sellers.

INDIAN TOBACCO.

The tobacco plant was introduced into India by the Portuguese about the year 1605. As in other parts of the world, it passed through a period of persecution, but its ultimate distribution over India is one of the numerous examples of the avidity with which advantageous new crops or appliances are adopted by the Indian agriculturist. Five or six species of *Nicotiana* are cultivated, but only two are found in India, namely, *N. Tabacum* and *N. rustica*. The former is a native of South or Central America, and is the common tobacco of India. About the year 1829 experiments were conducted by the East India Company towards improving the quality of leaf and perfecting the native methods of curing and manufacturing tobacco. These were often repeated, and gradually the industry became identified with three great centres: namely, (1) Eastern and Northern Bengal (more especially the District of Rangpur); (2) Madras, Trichinopoly, Dindigul, Coconada and Calicut in Southern India; and (3) Rangoon and Moulmein in Burma. Bengal is the chief tobacco growing Province, but little or no tobacco is manufactured there. The chief factories are near Dindigul in the Madras Presidency, though, owing to the imposition of heavy import duties on the foreign leaf used as a cigar wrapper, some cigar factories have been moved to the French territory of Pondicherry.

The Monghyr factory, which commenced business in 1908, had an output in 1918-19 of 2,024 million cigarettes and 144,000 lbs. of smoking tobacco.

The question of improving the quality of Indian tobaccos has received the attention of the Botanical section of the Agricultural Research Institute, Pusa, and three Memoirs have been published recording the results of investigations in that direction. The immediate problem at Pusa is the production of a good cigarette tobacco. Many attempts have been made in the past to introduce into India the best varieties of cigarette tobacco from America, but the results have been disappointing. It is now hoped to build up by hybridization new kinds of tobacco, suited to Indian conditions of growth, which possess in addition the qualities necessary to obtain a better price.

Area under Cultivation.—The cultivation of tobacco is very widespread in Burma. The two main varieties are called "Burmese tobacco" and "Havana tobacco." Of the Burmese tobacco there are two main varieties "Seywet-gyl," the large-leaved variety and

"Seywet-gyun," a smaller-leaved variety with pointed leaves. The former yields a heavier crop, but the latter gives better quality. There is always a great demand on the market for both the Havana and the Burma tobacco. The smooth leaves of the Havana plant are used for the wrappers and the coarser Burmese leaf for the filling.

The most important tobacco tracts in British India are:—(i) the Coimbatore and Dindigul tract of Madras, where the *Usi-Kappal* and *Wara Kappal* varieties are largely grown, the former supplying the Trichinopoly cigar; (ii) the Godavari Delta of Madras; (iii) the Rangpur tract of Bengal; (iv) the Districts of Bihar and Orissa; (v) Guzerat in Bombay and (vi) the delta tract of Burma.

The season for harvesting varies in different localities ranging from December to June, but the bulk of the crop is harvested during the months of February, March and April. The leaves when quite dry, are assorted and placed in heaps in stacks to ferment. They are then tied into bundles of 25 or 30, a useless leaf being employed for tying each bundle. The leaves are laid perfectly flat, the bundles being fan-shaped. In this condition they are baled, the broom-like ends projecting outwards. By varying the degree of fermentation of the leaves, different qualities of tobacco are obtained. A black variety is used in India for cake tobacco, and this is the most common product, but a certain amount of yellow leaf is grown for cigar making. The yield of tobacco varies in different localities ranging ordinarily from 160 lbs. to 800 lbs. per acre, the return under high cultivation being from 800 lbs. to even 3,200 lbs. per acre.

Exports.—The bulk of the Indian tobacco exported consists of leaf, the kinds chiefly shipped being the "Bispath" (cheap country tobacco) and "Poolah" varieties of the Rangoon kind. "Bispath" has no market in the United Kingdom, but is largely used by the Dutch. The total export of tobacco in 1918-19 amounted to 32,983,000 lbs. valued at Rs. 96,36,000.

Imports.—The demand for Army purposes has in recent years led to great increases in the imports of tobacco. In 1918-19 over four million lbs. of cigarettes were imported against 1,731,000 lbs. the pre-war average. Other kinds of tobacco imported amounted to 1,269,000 lbs. The total value of the imports being Rs. 2,14,61,000.

Calcutta Improvement Trust.

The Calcutta Improvement Trust was instituted by Government in January, 1912, with a view to making provision for the improvement and expansion of Calcutta by opening up congested areas, laying out or altering streets, providing open spaces for purposes of ventilation or recreation, demolishing or constructing buildings and re-housing the poorer and working classes displaced by the execution of improvement schemes.

The origin of the Calcutta Improvement Trust must, as in the case of the corresponding Bombay body, upon which the Calcutta Trust was to a large extent modelled, be looked for in a medical enquiry which was instituted into the sanitary condition of the town in 1896, owing to the outbreak of plague. It was estimated that the Trust might in the ensuing 30 years have to provide for the housing of 225,000 persons. The population of Calcutta proper, which includes all the most crowded areas, was 649,995 in 1891, and increased to 801,251, or by 25 per cent., by 1901. The corresponding figure according to the 1911 Census was 896,067.

The problem of expansion was difficult, because of the peculiar situation of Calcutta, which is shut in on one side by the Hooghly and on the other by the Salt Lakes.

Preliminary investigations continued for several years, so that it was only in 1910 that legislation was eventually introduced in the provincial legislature and the Trust instituted by it. The Bill provided for a scheme involving the expenditure of Rs. 8,22,00,000, and for special local taxation to this end. It also provided for the appointment of a whole time chairman of the board of trustees and the membership of the Trust was fixed at eleven, part of the members being nominated by Government and others elected by local bodies whose interests are most nearly concerned.

The following are the present Board of Trustees:—The Hon'ble Mr. C. H. Bompas, I.C.S., *Chairman*; the Hon'ble Mr. C. F. Payne, I.C.S., *Chairman of the Calcutta Municipal Corporation (ex-officio)*; the Hon'ble Raja Reshee Case Law, C.I.E., elected by the Corporation; the Hon'ble Rai Radha Charan Pal, Bahadur, elected by the Ward Commissioners; Mr. J. P. Wyness, elected by the Commissioners appointed under Sec. 8 (2) of the Calcutta Municipal Act, 1899; the Hon. Mr. F. W. Carter, C.I.E., C.B.E., elected by the Bengal Chamber of Commerce; the Hon'ble Rai Sitanath Rai Bahadur, elected by the Bengal National Chamber of Commerce; Sir R. N. Mookerjee, K.C.I.E., Mr. J. C. K. Peterson, C.I.E., I.C.S., and Rai Annada Prosad Sarkar, Bahadur, and Mr. W. K. Dods appointed by the Bengal Government.

The work upon which the Trust definitely embarked may be divided into three classes as follows:—

Many parts of Calcutta are overcrowded with buildings and ill-provided with roads. These areas are to be re-arranged both on the ground of sanitation and for convenience of traffic;

Population will continue to throng into the overcrowded parts unless it can live on the outskirts and at the same time have speedy access to the business centres of the town. Quick traffic can only take place along broad roads. These are almost wanting in Calcutta. The construction of broad roads will at the same time ventilate the overcrowded parts of the town and it has been recognised from the outset that the construction of broad roads running both north and south and east and west will thus secure a double object;

There is the question of providing for the population displaced by improvements, and still more important of providing for the natural growth of population by laying-out roads and building sites on sparsely populated areas on the outskirts of the town. When persons of the working class are displaced or likely to be displaced the Trust can build dwellings for them if private enterprise does not undertake the work.

In order to lay all their work upon a sure foundation the Trust charged their Chief Engineer, Mr. E. P. Richards, M.I.C.E., &c., to make a comprehensive review of the situation and recommendations and his report, a volume of 400 closely printed pages was issued in 1914. Meanwhile, the Board had embarked upon certain improvement schemes which would not be interfered with by any larger schemes adopted later and upon a re-housing scheme with a view to provide accommodation for persons likely to be displaced by the improved schemes under preparation. The buildings designed resembled those erected by the Bombay Improvement Trust.

The steady progress of these operations inevitably provoked vehement criticism of the kind that always arises upon schemes interfering with vested property interests, but by last year a great deal of practically useful work had been accomplished in the transformation of the congested areas and insanitary slums and the planning of new streets. Of the sixteen improvement schemes submitted to Government during the preceding three years, twelve were received sanction and one remained under consideration, while three were abandoned or modified. Of these the most costly scheme is the Central Avenue, a wide thoroughfare passing north to south, the acquisition of land for which will cost two hundred lakhs gross, and fifty lakhs nett. One of the most ambitious schemes of the Trust is that for the construction of a fine thoroughfare to connect the Howrah Bridge with the centre of commercial Calcutta. The estimated nett cost of the scheme is nearly 75½ lakhs, and it will be necessary to raise funds by the issue of debentures.

The Bengal Government, in a review of the Trusts operations, last year, partly endorsed the complaints of the critics, saying that while one of the objects of the Calcutta Improvement Act was the rehousing of the poorer and working classes displaced by the execution of the improvement schemes, the action taken by the

Trust to carry out this object did not appear to have been either adequate or satisfactory in its results. It had undertaken only one rehousing scheme, which could not be said to have been a success because the tenements provided by it had not attracted the working class for whom they were intended, but were largely occupied by men of poorer bhadrak class, students and others living without their families, who had not been displaced by the operations of the Trust.

The whole question had already been reviewed by the Trustees, and in summarising the

outlook they say, "The Improvement Trust is continually called on to weigh the rival claims of two conflicting policies: on the one hand it is urged to undertake Improvement Schemes in the north of Calcutta, so as to facilitate traffic and improve sanitary conditions and on the other hand there is the obvious necessity of developing suburban areas so as to accommodate not only the natural increase of population but also persons displaced by the execution of improvement schemes in the centre of the town. On the whole priority has been given and it can scarcely be doubted, rightly given, to the policy of suburban development."

BOMBAY IMPROVEMENT TRUST.

Bombay is an island twelve miles long, but very narrow and containing only 22 square miles altogether, but in the city, occupying little more than half the island, there lives a population enumerated at 972,892 at the Census in 1911, and actually totalling at the present time, according to conservative estimates, over a million and a quarter. Bombay is, in point of population, the second city of the British Empire. Seventy-six per cent. of its people live in one-roomed tenements. A terrible visitation of plague in 1896 harshly directed attention to the insanitary conditions arising from overcrowding and as it was recognised that the task of effecting the required improvements was too great for the Municipality, a special body, termed the Trustees for the Improvement of the City of Bombay, was appointed. It consists of 14 members, of whom four are elected by the Municipality and one each by the Chamber of Commerce, the Millowners' Association and the Port Trust, and the balance nominated by Government, or sit *ex-officio* as officers of Government. The Board is presided over by a whole-time chairman (who has hitherto always been either a covenanted civilian or an officer of the Public Works Department) and he is also head of the executive. The present chairman and members of the Trust are as follow:—

Chairman—

Mr. E. G. Turner, I.C.S., J.P.

Ex-officio Trustees—

Maj.-Gen. W. B. James, C.B., C.I.E., M.V.O.,
General Officer Commanding Bombay District.

Mr. J. P. Brander, I.C.S., J.P., Collector of Bombay.

Mr. H. B. Clayton, I.C.S., J.P., Municipal Commissioner for the City of Bombay.

Elected by the Corporation—

The Hon. Sir Dinsha Edulji Wacha, Kt., J.P.
The Hon'ble Mr. Chunilal V. Mehta, J.P.,
Mr. Cowasji Jehangir Readymoney, O.B.E., J.P.

The Hon. Mr. P. C. Sethna, O.B.E., J.P.

Elected by the Chamber of Commerce—
Mr. H. G. Cocke.

Elected by the Port Trustees—
Mr. G. W. Hatch, I.C.S., J.P.

Elected by the Millowners' Association—
Sir Sassoon David, Bart., J.P.

Nominated by Government—

Sir Lawless Hepper, Kt., J.P.

Mr. Mahomedbhoy Currimbhoy Ebrahim.

The Hon. Mr. Lalubhai Samaldas Mehta,
C.I.E., J.P.

The specific duties of the Trust are to construct new and widen old streets, open out crowded localities, reclaim lands from the sea to provide room for expansion, and construct sanitary dwellings for the poor.

Bombay city grew on haphazard lines, houses being added as population poured in with the growth of trade and without any regard to town planning or the sanitary requirements of a great town. The price of land was always comparatively high, owing to the small area of the island, and while the builder had only one object in view, namely, to collect as many rent paying tenants as possible on the smallest possible piece of land, there were no proper restraints to compel him to observe the most ordinary rules of hygiene. The result was the erection of great houses, sometimes five and six storeys high, constituting mere nests of rooms. There was no adequate restriction as to the height of these chawls, or the provision of surrounding open space, so that the elementary rules as to the admission of light and air went unobserved and the house builder invariably erected a building extending right up to the margins of his site. Consequently, great houses accommodating from a few hundred to as many as four thousand tenants were built with no more than two or three feet between any two of them and with hundreds of rooms having no opening at all into the outer air.

The Trust has practically reconstructed large areas on modern sanitary lines, but the old municipal by-laws having until within the past year remained quite inadequate for the due control of private building operations by the Municipality, the Trust have spent millions sterling of public money in sweeping away abuses, while unscrupulous landlords, still unchecked, added in the same old manner to the insanitary conditions of the place. It is hoped that the amendment of the by-laws, as recently settled, will overcome this evil of bad building.

Certain Government and Municipal lands were vested in the Trust, the usufruct of which it enjoys, and the Trust receives a contribution

from municipal revenues amounting to a definite share in the general tax receipts, approximating to 2 per cent. on assessments and subject to no maximum. Works were financed out of 4 per cent. loans, until the war stopped borrowing by the Trust, the loans being guaranteed by the Municipality and Government, and the revenue of the Trust being used to meet interest and sinking fund charges.

The salient features of the Trust's programme of 41 schemes as completed or sanctioned up to 1918-19 may be summarised as follows:

—Capital spent on acquisition and works gradually rises from 693 lakhs at end of 1917-18 to 969 lakhs at end of 1944-45. Debt gradually rises from 568 lakhs in 1917-18 to 788 lakhs in 1924-25. Annual interest and sinking fund charges thereon gradually rise from 25.62 lakhs in 1917-18 to 35.85 in 1925-26. From 1959-60 they gradually fall as loans are paid off till they vanish in 1984-85. Permanent ground rents gradually rise from 12.84 lakhs in 1917-18 to 30.33 lakhs in 1946-47. Nett annual revenue from estates rises from 24.52 lakhs in 1917-18 to 31.33 lakhs in 1956-57. From 1998-99 onwards the nett revenue gradually falls as scheduled lands revert in Government and the Municipality till when in 2029-30 none such remains with the Trust it reaches 25.11 lakhs. Margin for expansion of programme, Rs. 122 lakhs.

Plan of operations.

The work of the Trust, as epitomised by these figures, can be divided into two parts. The first concerned the immediate alleviation of the worst burdens of insanitation and the second consisted of opening up new residential areas. The Trust began by attacking the most insanitary areas cutting broad roads through them. Meanwhile, large areas of good building land, lying idle for want of development works, were developed and brought on the market, sold at remunerative rates and largely built upon. Instances of this development are the Chaupati and Gamdevi estates, the land overhung by Malabar Hill, between it and the native city. These were cut up with fine new roads and are now nearly covered with modern suburban dwellings. Two of the most insanitary quarters in the midst of the city have been levelled to the ground and rebuilt in accordance with hygienic principles. Sanitary chawls have been built for over 20,000 persons.

The death-rate in the Trust's permanent chawls has always been considerably below the general death-rate in the vicinity. The smallest one room tenement on the Trust Estate is large enough for a family of five.

The second phase of the Trust's work, arising gradually out of the first and advancing along with its later stages, consists of the development of a new suburban areas in the north of the island, beyond the present city, and the construction of great arterial thoroughfares traversing the island from north to south.

During the past four years there has been an important movement towards the establishment of co-partnership housing societies on the Board's Estate. The Board regard the new departure as one deserving every

encouragement at their hands, especially in connection with the disposal of land in their suburbs in the north of the island and sites have been given to societies on specially favourable terms.

But in recent years the Improvement Trust have perpetually been subjected to fierce criticism, based upon the undoubted fact that its operations disoused population more quickly than they provided new accommodation. This evil has been aggravated by the great influx of new population into the city during the past five or six years. The result has been a gross increase of overcrowding in all kinds of housing accommodation throughout the city and a violent increase in rents. Criticism of the Trust assumed such proportions and received such general support that the abolition of that body and the absorption of its duties by the Municipality was formulated into definite proposals by Government two years ago. The great difficulty of the housing problem, however, meanwhile compelled Government to pass Rent Acts for the protection of tenants and to tackle on a large scale the problem of providing further housing accommodation. It was recognized that vast housebuilding operations must be undertaken and this involved the supervision of the work by a special body. Consequently, the Trust from being moribund has suddenly obtained a new lease of life.

Enormous schemes for the expansion of housing in the city are now passing through the final stages before being put into execution. Government, the Improvement Trust and the great employers of labour will all be concerned in the work and the Improvement Trust have floated a huge new programme, their new schemes sanctioned during 1919 representing a greater undertaking than all their former schemes put together.

The new schemes of the Trust concern the northern part of Bombay Island, where large opportunities for suburban development offer themselves. At Worli on the north-west of the Island, at Dharavi on the north, and at Sewri and Wadala on the north-east, the Trust have undertaken development schemes involving the acquisition and development of 1,558 acres, or 2.43 square miles, that is, between 1/9th and 1/10th of the whole area of the Bombay Island. A considerable amount of filling of lowlying land is involved and for this purpose material from the hills on the north-east and north-west of the Island will be utilised, the hills being lowered in such a manner as to level them into desirable building sites. The outlay involved by these three schemes amounts to over Rs. 590 lakhs (£6,70,000, at 2s. 4d. exchange) and the execution of the necessary work will be proceeded as rapidly as possible and will occupy about 10 years. There will be room for more than a quarter of a million new population, equal to nearly 1/4th of the present total population of the city, in the three new estates when the are fully developed and the recoupment which the Trust will derive from the disposal of building sites upon them will repay almost the whole of the enormous capital outlay.

The Indian Ports.

The administration of the affairs of the larger ports (*Calcutta, Bombay, Madras, Karachi, Rangoon and Chittagong*) is vested by law in bodies specially constituted for the purpose. They have wide powers, but their proceedings are subject in a greater degree than those of municipal bodies to the control of Government. Except in Calcutta, the elected members are fewer in number than the nominated members. At all the ports the European members constitute the majority and the Board for Rangoon consists mainly of European members.

The income, expenditure and capital debt, according to the latest figures obtainable from the Department of Statistics (India) of the five principal ports managed by Trusts (Aden is excluded from the tables) are shown in the following table :—

—	Income.	Expenditure.	Capital Debt.
	£	£	£
Calcutta ..	1,055,945	1,041,957	7,045,785
Bombay ..	1,213,416	1,103,673	10,204,383
Karachi ..	453,838	326,050	1,725,662
Madras ..	111,618	119,436	926,403
Rangoon ..	276,354	271,681	1,990,800

In the Department of Statistics, India, the following returns have been compiled, showing the ratios borne by the income and the expenditure of each port to the total income and the

total expenditure, respectively, of all the chief Indian ports during the year 1917-18, the latest period for which the returns are obtainable :—

—	Income per cent.	Expenditure per cent.
Calcutta	33·7	36·1
Bombay	38·7	38·3
Madras	3·6	4·1
Karachi	14·5	11·3
Rangoon	8·8	9·4
Chittagong	0·7	0·8

The latest return of the Department of Statistics shows that in the ten years ending 1917-18, the income and expenditure of each port have increased as shown in the following table. The total income of all the ports has increased in the decade by 79·6 per cent. and the total expenditure by 62·2 per cent. :—

—	Increase per cent.	
	Income.	Expenditure.
Calcutta	31·8	30·5
Bombay	156·1	135·6
Madras	24·0	30·3
Karachi	159·4	53·0
Rangoon	43·6	39·1
Chittagong	80·9	97·5

The war has affected the trade of all the ports in a manner which makes it useless to continue comparisons up to date on the lines of the foregoing figures.

CALCUTTA.

The Commissioners for the Port of Calcutta are as follows :—

Appointed by Government.—The Hon'ble Mr. C. J. Stevenson Moore, C. V. O., I.C.S., Chairman, Mr. S. C. Williams, Vice-Chairman.

Elected by the Bengal Chamber of Commerce.—Mr. C. F. Beadell (Becker Gray & Co.); Mr. S. G. L. Eustace (Kilburn & Co.); Mr. L. Edwards (Andrew Yule & Co.); The Hon'ble Mr. W. E. Crum, O.B.E. (Graham & Co.); Mr. A. Cameron (Mackinnon Mackenzie & Co.); The Hon'ble Sir F. W. Carter, C.I.E., C.B.E. (Turner Morrison & Co.).

Elected by the Calcutta Trades Association.—Mr. C. F. Hooper (Thacker Spink & Co.).

Elected by the Bengal National Chamber of Commerce.—Babu Nibaran Chandra Sircar (N. C. Sircar & Sons).

Elected by the Municipal Corporation of Calcutta.—The Hon'ble Raja Reshee Case Law, C.I.E.

Nominated by Government.—Mr. A. M. Clark (Ag. Agent, Bengal Nagpur Railway); Mr. J. A. Marshall (Agent, East Indian Railway); Mr. J. Coates (Agent, E. B. Railway); Mr. A. H. Lloyd, I.C.S. (Collector of Customs); and Captain M. W. Farewell, C.I.E., R.I.M. (Captain Superintendent, Kidderpore Dockyard).

The principal officers of the Trust are—

Secretary.—Mr. T. H. Elderton.

Traffic Manager.—Mr. T. J. McCloughlin.

Chief Accountant.—Mr. N. G. Park, C.A.

Chief Engineer.—Mr. J. Mc Glashan, M. INST. C.E.

Deputy Conservator.—Commander E. A. Constable, R.N.

Medical Officer.—Lt.-Col. R. P. Wilson, F.R.C.S., I.M.S.

Consulting Engineer and London Agent.—Mr. J. Angus, M. INST. C.E.

The operations of the Trust were seriously affected by the war, as owing to the position of Calcutta, there was practically no military traffic to be handled and the volume of imported goods and of coal exported shrank very largely, owing to the shortage of tonnage from unrestricted submarine attack on all vessels, firstly, by the loss of vessels actually engaged in trade with Calcutta, secondly, by the general diversion of ships to the Cape route with a consequential reduction in the number of voyages made by each, and thirdly, by the withdrawal of vessels from Eastern waters to meet the losses of tonnage incurred in Europe. A further loss of trade occurred from the restriction on the import of Burma rice into Calcutta, which the Government of India found it necessary to impose in order to relieve the heavy demands on rolling stock. The nett tonnage of exports and imports entering the port shrank from 4,256,987 tons in the last pre-war year to 2,094,011 in 1917-18. The Port Commissioner's income meanwhile increased from Rs. 1,51,28,435 to Rs. 1,58,39,175, but this was the result of the imposition of special war surcharges. The Commissioners

are under obligation to reduce or discontinue the special war charges as soon as the revival of trade renders this possible, but they did not last year feel justified in doing either, because to have done so would have resulted in a deficit of Rs 17.62 lakhs on the year's working, while, further, the improvement that took place in the Commissioners' ordinary receipts did not keep pace with the increased expenditure under all main heads, especially under establishment, stores, maintenance and repairs, owing to the rise in prices.

At the time of the outbreak of war, the Commissioners had in hand large development schemes which had been prepared as the outcome of the report of the Special Port Facilities Committee appointed by Government in December 1913 to investigate the important questions connected with the future development of the port, but the executions of these schemes, so far as they were in hand in August 1914, including the construction of a new dock to be entitled King George's Dock, has been delayed both on account of the impossibility of obtaining materials and the financial restrictions laid down by the Government of India.

BOMBAY.

The Board of Trustees of the Port of Bombay is constituted of 17 members, as follows:—

Appointed by Government.—Mr. G. W. Hatch, I.C.S. (Chairman), Mr. Mahomedbhoy Currimbhoy Ebrahim (Messrs. Currimbhoy Ebrahim & Co.), Sir Lawless Hepper, Kt. (Agent, G. I. P. Railway), The Hon'ble Mr. Purshotamdas Thakurdas, C.I.E., M.B.E., (Messrs. Narandas Rajaram & Co.) Major General W. C. Knight, C.B., C.S.I., D.S.O. (Military Officer serving with Bombay Brigade), The Hon'ble Mr. Phiroze C. Sethna, O.B.E. (Messrs. Phiroze C. Sethna), Mr. P. W. Monie, I.C.S. (Municipal Commissioner, Bombay), Captain N. F. J. Wilson, C.M.G., C.B.E., R.N. (Director of the Royal Indian Marine), Mr. G. S. Hardy, I.C.S., (Collector of Customs, Bombay), Mr. W. P. Pechey (Acting Agent, B. B. & C. I. Railway).

Elected by the Chamber of Commerce.—Mr. A. H. Froom (P. & O. and B. I. S. N. Co.), Sir Thomas W. Birkett Kt., (Killick Nixon & Co.), The Hon'ble Mr. Nigel F. Paton (W. & A. Graham & Co.), Mr. Malcolm N. Hogg. (Forbes, Forbes, Campbell & Co.), Mr. M. Nissim (David Sassoon & Co.)

Elected by the Indian Merchants' Chamber & Bureau.—Mr. Manu Subedar, B.A., B.Sc. (Lalji Naranji & Co.)

Elected by the Grain Merchants' Association.—Mr. Velji Lakhmsee Napu, B.A., LL.B. (Nappoo Nensi & Co.).

The following are the principal officers of the Trust:—

Secretary.—Mr. W. R. S. Sharpe.

Chief Accountant.—Mr. J. Tyers

Engineers.—Messrs. P. G. Messent, C.I.E., M. INST. C.E. (Chief Engineer). Mr. A. C. W. Fosbery, M. INST. C.E. (Deputy Chief Engineer).

Port Officer.—Captain C. S. Hickman, D.S.O., R.I.M.

Docks Manager.—Lt.-Colonel J. A. Cherry.

The revenue of the Trust in 1916-17 amounted to Rs. 1,93,21,334. The expenditure amounted to Rs. 1,82,86,217. The net surplus on the year's working was Rs. 10,35,117, which was transferred to the Revenue Reserve Fund, from which the Trustees are temporarily financing a large part of their capital expenditure. The balance of the fund at the close of the year amounted to Rs. 89,78,174. The aggregate capital expenditure during the year was Rs. 37,52,369. The total debt of the Trust at the end of the year amounted to Rs. 15,47,65,747.

The trade of the Port of Bombay during the last official year aggregated 210 crores in value.

The number of steam and square rigged vessels which entered the docks or were berthed at the harbour walls and paid dues, excluding those which remained for unloading and loading in the harbour stream during recent years, including last year, is shown by the following statement:—

Year.	Number.	Tonnage.
1906-07	.. .. 1476	2,690,406
1907-08	.. .. 1477	2,678,345
1908-09	.. .. 1474	2,633,303
1909-10	.. .. 1611	2,747,779
1910-11	.. .. 1589	2,866,623
1911-12	.. .. 1519	2,767,913
1912-13	.. .. 1566	2,926,506
1913-14	.. .. 1579	3,135,597
1914-15	.. .. 1880	4,417,035
1915-16	.. .. 1794	3,939,721
1916-17	.. .. 2112	5,031,572
1917-18	.. .. 2069	4,746,578
1918-19	.. .. 2058	4,526,846

The two dry docks were in constant occupation, the total tonnage of vessels dry docked amounting to 1,323,616 tons which was less than the previous year's record by 1,30,072 tons.

KARACHI.

The members of the Board of Trustees of the Port of Karachi are as follows :—

Chairman.—Mr. J. B. S. Thubron, C.I.E., P.W.D.

Appointed by Government.—Mr. W. U. Nicholas (Anderson & Co.) (on leave); Mr. E. Miller (Messrs. Ewart Ryrie & Co.) (Acting); Mr. N. D. Calder (Dy. Traffic Manager, Karachi Port North Western Railway); Major G. M. Glynton, D.S.O., (General Staff Officer, Karachi Brigade); Mr. T. J. Stephen (The National Bank of India, Ltd.); Mr. Gidumal Lekhraj (Representative Indian Merchants), Col. H. J. Mahon, C.I.E. (Embarkation Commandant). One vacant

Elected by the Chamber of Commerce.—Mr. E. A. Pearson (Forbes, Forbes Campbell & Co., Ltd.); Mr. A. O. Brown (Mackinnon Mackenzie & Co.); Mr. S. C. Woodward (Clements Robson & Co.) (on leave); Mr. H. G. Houghton (Messrs. Donald Graham & Co.) (Acting).

Elected by the Municipality.—Mr. Wadhmal Oodharam, B.A., LL.B.

The principal officers of the Trust are :—

Port Officer.—Commander G. N. Forteath, R. I. M.

Assistant Port Officer and Harbour Master.—Commander H. Tronson, R. N. R. (Retd.).

Secretary & Chief Accountant.—Mr. B. A. Ingle, B.A., C.A.

Chief Engineer.—Mr. W. H. Neilson, B.A., B.A.I., M.I.C.E.

Deputy Chief Engineer.—Mr. T. H. E. Coad.

The revenue receipts and expenditure of the Port of Karachi for the year 1918-19 were as under :—

Revenue receipts (excluding the Port Fund Account, Rs. 53,76,732, Expenditure Rs. 53,67,131, Surplus Rs. 9,601. Reserve Fund Rs. 36,64,300.

The number of vessels which entered the Port, during the year 1918-19 exclusive of vessels put back and fishing boats, was 4,576 with a tonnage of 2,367,883½ against 5,504 with a tonnage of 3,074,606½ in 1917-18. 1,167 steamer of all kinds entered the Port with a tonnage of 2,162,716 against 1,439 and 2,851,535, respectively, in the previous year. Of the above, 1,093 were of British Nationality.

Imports landed at the ship wharves during the year totalled 175,242 tons against 161,115 in the previous year. Total shipments from the shipwharves were 1,862,399 tons in 1918-19 against 3,060,390 tons in 1917-18.

A lower Harbour Improvement Scheme was sanctioned by Government in 1915 but temporarily being up by the war and in accordance with this the entrance channel of the port will be deepened to a depth of 32 ft. 6 in. at L. W. O. S. T. This will enable any ship that can pass through the Suez Canal to enter the harbour and take up a berth at the lowest state of the tide. The sanctioned draught for the Suez Canal is now 29 feet, but 32 feet are being worked up to and it is understood that this will not be the extreme limit.

MADRAS.

The following gentlemen are the Trustees of the Port of Madras :—

Officials.—Sir Francis J. E. Spring, K.C.I.E. (Chairman, on leave); the Collector of Customs; Captain C. B. Henley, R.I.M. (Presidency Port Officer) and Mr. M. Brown (Superintending Engineer, V. Circle, Madras). The Hon'ble Mr. H. H. G. Mitchell, O.B.E., M.I.C.E., Acting Chief Engineer and Chairman.

Non-Officials.—(1) *Nominated by Government*.—Mr. A. A. Biggs, M. Inst. C. E., Mr. B. C. Scott, M. R. Ry., Rao Bahadur N. C. Rajagopala Acharya; Khan Bahadur Mahomed Abdul Kuddus Badsha Saheb. (2) *Representing Chamber of Commerce, Madras*.—The Hon'ble Sir Gordon Fraser; Mr. W. A. Turner; Mr. J. F.

Simpson; Mr. H. P. M. Rae. (3) *Representing Southern India Chamber of Commerce, Madras*.—Mr. R. Ry. C. Gopal Menon Averal and Mr. M. A. Subban Subite Bahadur. (4) *Representing Madras Trades Association*.—Mr. S. J. Green.

The receipts of the Trust from all sources in 1918-19 were Rs. 19,71,940 against Rs. 16,74,265 in 1917-18. These are the largest annual receipts on record and it is expected that those of 1919-20 will exceed them. The gross expenditure out of revenue—not counting contributions made by revenue to capital or repayment of debt—was Rs. 20,17,941. During the year 406 vessels with an aggregate tonnage of 679,983, including 147 from foreign ports, called at the port as against 354 vessels aggregating 738,371 tons in the preceding year.

RANGOON.

The personnel of the Commissioners for the port of Rangoon is comprised of the following thirteen members :—

Appointed by Government.—Mr. J. L. Holmes, M. Inst. C.E., (Chairman and Chief Engineer), Mr. A. E. Boyd, (Chief Collector of Customs, Burma); Mr. H. C. Nangle (Commissioner of Police, Rangoon); Captain E. J. C. Hordern,

R.I.M., (Principal Port Officer, Burma), Mr. G. Scott, M.A., I.C.S., (President, Rangoon Municipality); Mr. J. R. D. Glascott; Mr. J. R. Baxter and Maung Po Yee.

Elected by the Burma Chamber of Commerce.—The Hon'ble Mr. E. J. Holberton, C.B.E., (Vice-Chairman), Messrs. J. Hogg, A. B. Ritchie and J. A. Swan.

Elected by the Rangoon Trades Association.—
Mr. J. Donald.

Officers of the Trust are—

*Secretary.—*Mr. I. Cowling.

*Resident Engineer.—*Mr. W. Lindley, *subprotem.*

*Executive Engineer (River Conservancy).—*Mr. E. C. Niven, A. M. INST. C. E. (on leave); Mr. W. Lindley, (officiating).

*Deputy Conservator.—*Mr. H. G. G. Ashton; D.S.O.

*Traffic Manager.—*Mr. E. H. Keeling, M.C., B.A.

*Chief Accountant.—*Mr. D. H. James, A.C.A.

*Port Health Department.—*Dr. F. A. Foy, M.B., C.M., D.P.H., Port Health Officer.

*Port Police Department.—*Mr. T. Austin, Superintendent.

The receipts and expenditure on revenue account of the port of Rangoon in 1918-19 were as follows :—

	Rs.
Receipts	52,27,218
Expenditure	45,30,908

The capital debt of the port at the end of the year was Rs. 2,98,62,000. Securities (at cost) of Rs. 65,48,699 are held at the credit of the sinking fund.

The total value of the trade of the port during the year was Rs. 6334.18 lakhs, as compared with Rs. 4,900.21 lakhs in the preceding year.

The total imports (landed or sent inland in river craft) from seagoing vessels amounted to 713,191 tons. Goods landed from vessels arriving from European ports and other ports outside Asia declined by 16 per cent., and from Asiatic ports on the other hand were 16 per cent. more than in 1917-18. The traffic at the jetties for inland vessels totalled 1,294,733 tons. The total number of steamers (excluding Government vessels) entering the port was 1,038 with a total net registered tonnage of 1,990,472 being an increase of 124 steamers and 245,536 tons over the previous year.

CHITTAGONG.

Chittagong, in Eastern Bengal, on the right bank of the Karnaphuli river 12 miles from its mouth, was already an important place of trade in the sixteenth century, when the Portuguese merchants gave it the name of Porto Grando. The construction of the Assam Bengal Railway has made it the natural outlet for the trade of Assam and part of Eastern Bengal. The chief business is the export of the Piecegoods, salt and kerosene oil are imported, and jute and tea are the principal exports.

The chief business is the export of tea, piece goods, salt and kerosine oil are imported, and tea and jute are the principal exports—

FOREIGN TRADE, 1918-19. Rs.

Imports	42,29,925
Exports	3,35,52,642

COASTING TRADE, 1918-19.

Imports	2,20,06,566
Exports	1,73,87,203

VIZAGAPATAM HARBOUR PROJECT.

The question of the creation of a harbour at Vizagapatam, to supply an outlet for a large area of fertile country hitherto undeveloped and without suitable access to the outside world, was been lately brought to the fore through a report to the Bengal-Nagpur Railway Company by their consulting engineers, Sir John Wolfe Barry, Lyster and partners. This report, which was based on personal inspection, upholds the practicability of creating, at no very extravagant cost, an inland harbour to which access would be maintained by two breakwaters projecting into the sea, and by dredging a channel to the depth (in the first instance) of 24 feet. A deep-water quay would be provided, 1,500 feet in length, with a possibility of supplying further accommodation in the future. The proposals made in this report were carefully gone into at site by representatives both of the consulting Engineer and of the Bengal Nagpur Railway and working plans have been prepared so that there might be no delay in starting work when funds became available for the purpose.

The question received sympathetic consideration on the part of the Indian Government and the Bengal-Nagpur Railway will probably be given powers to raise capital for the construction and working of the port as part of their railway system. That the creation of such a port would have a beneficial influence on the development of a large area in East Central India seems unquestioned. It is pointed out that Vizaga-

patam, lying as it does in front of the only practicable gap in the barrier of the Eastern Ghats, is formed by nature to be the outlet of the Central Provinces, from which a considerable amount of trade has taken this route in the past, even with the imperfect communications hitherto available. A necessary complement of the scheme would be the construction of the proposed railway by Parvatipuram to Raipur, which with the existing coast line of the Bengal Nagpur Railway, would make a large and rich area tributary to the proposed port, and obviate the long and expensive circuit by Calcutta. A link would also be supplied in the most direct route to Rangoon from Europe by way of Bombay, while from an imperial point of view the possible provision of a fortified port on the long and almost unprotected stretch of coast between Colombo and Calcutta is held to be a consideration of great importance. The lofty projecting headland of the Dolphin's Nose would, it is pointed out, offer facilities for this purpose as well as protecting the entrance to the Port from the effects of south and south-westerly gates.

Necessary steps are being taken by the Government of Madras to achieve this end and proposals are being made to acquire a vast extent of land for the construction of the Harbour. H. E. the Viceroy in a speech at Madras on 24th November said the Government of India hoped to make material progress with the scheme in the near future.

Famine.

Famine in India is the inevitable accompaniment of economic conditions which leave the bulk of the people dependent on the soil for their means of livelihood. It is intensified, because the produce of the soil over the greater part of India is independent on a short rainy season, and the rains are erratic and subject to violent fluctuations. It falls with exceptional severity on India because the soil is divided into a multitude of petty holdings, tilled by people without any capital, living for the most part from hand to mouth, and amongst whom credit ceases to exist as soon as the rains fall. In other agricultural countries there are good seasons and bad; but there is none other, with the possible exception of China, where in a famine year millions of acres may not yield so much as a blade of grass, except under artificial irrigation. The conclusion to be drawn from these conditions is that for many years to come India must be susceptible to famine. The shock of famine may be mitigated by the spread of railways, by the development of irrigation, the growth of manufacturing industry and the improvement of rural credit. There is evidence that all these forces are tending greatly to reduce the social and economic disturbance caused by a failure of the rains. But they cannot entirely remove it.

Famine Under Native Rule.

At one time there was a general tendency to attribute famine in India entirely to the effect of British rule. In the golden age of India, we were told—whenever it may have been—famine was unknown. But India had been drained of its resources of food by the railways, the people had been impoverished by the land revenue demand and the country as a whole had been rendered less capable of meeting a failure of rains by the "Drain" caused by the Home Charges (*q.v.*). These fallacies have disappeared under the inexorable logic of facts. A better knowledge of Indian history has shown that famines were frequent under Native rule, and frightful when they came. "In 1630" says Sir William Hunter, in the History of British India, "a calamity fell upon Gujarat which enables us to realise the terrible meaning of the word famine in India under Native rule. Whole cities and districts were left bare of inhabitants." In 1631 a Dutch merchant reported that only eleven of the 260 families at Swally survived. He found the road thence to Surat covered with bodies decaying on the highway where they died, there being none to bury them. In Surat, that great and crowded city, he could hardly see any living persons; but "the corpses at the corner of the streets lie twenty together, nobody burying them. Thirty thousand had perished in the town alone. Pestilence followed famine." Further historical evidence was adduced by Sir Theodore Morrison in his volume on the Economic Transition of India. The "Drain" theory has been exploded. It has come to be seen that whilst railways have checked the old-fashioned practice of storing grain in the villages they have made the reserves, where

they exist, available for the whole of India. In India there is now no such a thing as a food famine; the country always produces enough food for the whole of the population; famine when it comes is a money famine, and the task of the State is confined to providing the means for those affected by drought to earn enough to buy food. The machinery whereby this is done will be examined after we have seen the experiences through which it was evolved.

History of Recent Famines.

The Orissa famine of 1865-67 may be taken as the starting point because that induced to first great and organised effort to combat distress through State agency. It affected 180,000 square miles and 47,500,000 people. The Bengal Government was a little slow in appreciating the need for action, but later food was poured into the district in prodigious quantities. Thirty-five million units were relieved (a unit is one person supported for one day) at a cost 95 lakhs. The mortality was very heavy, and it is estimated that a million people, or one-third of the population, died in Orissa alone. This was followed by the Madras famine of 1866, and the famine in Western India of 1868-70. The latter famine introduced India to the great migration from Marwar which was such a distinguishing feature of the famine of 1899-1900; it is estimated that out of a total population of a million and a half in Marwar, one million emigrated. There was famine in Behar in 1873-74, then came the great South Indian Famine of 1876-78. This affected Madras, Mysore, Hyderabad and Bombay for two years and in the second year extended to parts of the Central and United Provinces and to a small tract in the Punjab. The total area affected was 257,000 square miles and the population 58,500,000. Warned by the excessive expenditure in Behar and actuated by the desire to secure economy the Government relief programme was not entirely successful. The excess mortality in this famine is said to have been 5,250,000 in British territory alone. Throughout British India 700,000,000 units were relieved at a cost of Rs. 8½ crores. Charitable contributions from Great Britain and the Colonies aggregated Rs. 84 lakhs.

The Famine Codes.

The experiences of this famine showed the necessity of placing relief on an organised basis. The first great Famine Commission which sat under the presidency of Sir Richard Starchey, elaborated the Famine Codes, which amended to meet later experience, form the basis of the famine relief system to-day. They recommended (1) that employment should be given on the relief works to the able-bodied, at a wage sufficient for support, on the condition of performing a suitable task; and (2) that gratuitous relief should be given in their villages or in poor houses to those who are unable to work. They recommended that the food supply should be left to private agency; except where that was unequal to the demands upon it. They advised that the land-owning classes should be assisted by loans, and by general suspensions of revenue in proportion to the crop failure. In sending a

Famine Code to the provincial governments, the Government of India laid down as the cardinal feature of their policy that the famine wage "is the lowest amount sufficient to maintain health under given circumstances. Whilst the duty of Government is to save life, it is not bound to maintain the labouring population at its normal level of comfort." Provincial codes were drawn up, and were tested by the famine of 1896-97. In that 307,000 square miles were affected, with a population of 69,500,000. The numbers relieved exceeded 4,000,000 at the time of greatest distress. The cost of famine relief was Rs. 7½ crores, revenue was remitted to the extent of Rs. 1½ crore, and loans given aggregating Rs. 1½ crore. The charitable relief fund amounted to about Rs. 1½ crore, of which Rs. 1½ crore was subscribed in the United Kingdom. The actual famine mortality in British India was estimated at 750,000. The experiences of this famine were examined by a Commission under Sir James Lyall, which reported that the success attained in saving life and the relief of distress was greater than had ever been recorded in famines, comparable with it in severity, and that the expense was moderate. But before the Local Governments had been given time to digest the proposals of this Commission or the people to recover from the shock, the great famine of 1899-1900 supervened.

The Famine of 1899-1900.

This famine affected 475,000 square miles with a population of 59,500,000. In the Central Provinces, Berar, Bombay, Ajmer, and the Hissar district of the Punjab famine was acute: it was intense in Rajputana, Baroda, Central India, Hyderabad and Kathiawar. It was marked by several distinctive features. The rainfall over the whole of India was in extreme defect, being eleven inches below the mean. In several localities there was practically no rain. There was in consequence a great fodder famine, with a terrible mortality amongst the cattle. The water supply was deficient, and brought a crop of difficulties in its train. Then districts like Gujarat, where famine had been unknown for so many years that the locality was thought to be famine immune, were affected; the people here being softened by prosperity, clung to their villages, in the hope of saving their cattle, and came within the scope of the relief works when it was too late to save life. A very large area in the Native States was affected, and the Marwaris swept from their impoverished land right through Central India like a horde of locusts, leaving desolation in their train. For these reasons relief had to be given on an unprecedented scale. At the end of July 4,500,000 persons were supported by the State, Rs. 10 crores were spent on relief, and the total cost was estimated at Rs. 15 crores. The famine was also marked by a widespread acceptance by Native States of the duty hitherto shouldered by the Government of India alone—the supreme responsibility of saving human life. Aided by loans to the extent of Rs. 3½ crores, the Native States did a great deal to bring their administration into line with that in British India. Although actual deaths from starvation were insignificant, the extensive outbreaks of cholera, and the devastating epidemic of

malaria which followed the advent of the rains induced a famine mortality of approximately a million. The experiences of this famine were collated by the Commission presided over by Sir Antony MacDonnell. This Commission reported that taking the famine period as a whole the relief given was excessive, and laid down certain modified lines. The cardinal feature of their policy was moral strategy. Pointing out that if the people were assisted at the start they would help themselves, whilst if their condition were allowed to deteriorate it proceeded on a declining scale, they placed in the forefront of their programme the necessity of "putting heart into the people." The machinery suggested for this purpose was the prompt and liberal distribution of tagal loans, the early suspension of revenue, and a policy of prudent boldness, starting from the preparation of a large and expansive plan of relief and secured by liberal preparations, constant vigilance, and a full enlistment of non-official help. The wage scale was revised; the minimum wage was abolished in the case of able-bodied workers; payments by results were recommended; and proposals were made for saving cattle.

Success of the new policy.

The effectiveness of this machinery was partly demonstrated during the three lean years which followed the great famine in the Bombay Presidency. But it received its most conspicuous demonstration when the rains failed in the United Provinces in 1907-08. Moral strategy was practised here on an unprecedented scale, tagal loans being granted with the greatest liberality. The effect of these measures was succinctly indicated by the Lieutenant-Governor of the United Provinces; Sir John Hewett, in a speech in summarising his administration prior to his departure in England in March 1912. He showed that in the autumn harvest of 1907 there was a shortage of 4 million tons of food grains and in the spring harvest a shortage of 3 million tons, giving a total of seven million tons, or the food supplies for the Province for nine months and an economic loss of £38 million pounds. The Government advanced £1½ million to cultivators for temporary purposes and large sums for wells and permanent irrigation. The whole of this sum was repaid except fifty-four thousand pounds remitted owing to a second bad season and twenty-five thousand pounds then outstanding. By common consent a great famine had never been met with less loss and suffering to the people, and two years later hardly a trace of it remained. In 1911 the rainfall failed over a considerable area in Gujarat in the Bombay Presidency and again in 1912 in the Ahmednagar District of the Bombay Deccan and both these partial failures demonstrated that the shock of famine is far less severe now, owing to the increased resourcefulness of the people, than it was so late as 1899. Still further evidence in the same direction was furnished when the rains failed over large areas in the United Provinces in 1913-14. This famine affected 17,000 square miles with a population of 5½ millions, whilst distress was grave in 30,000 square miles with a population of 14 millions.

Three points soon emerged from the year—the people showed greater resisting power owing to their improved economic condition; they met the emergency with wonderful courage and resource; and the application of the relief programme brought the numbers on public works within manageable proportions, and induced the speedy return of the people to their normal avocations when the advent of bountiful rains in 1914 enabled agricultural operations to be generally resumed.

The Government of India is now in possession of complete machinery to combat the effects of drought. In ordinary times Government is kept informed of the meteorological conditions and the state of the crops; programmes of suitable relief works are kept up to date, the country is mapped into relief circles, reserves of tools and plant are stocked. If the rains fail, policy is at once declared, non-officials are enlisted, revenue suspended and loans for agricultural purposes made. Test works are then opened, and if labour in considerable quantities is attracted, they are converted into relief works on Code principles. Poor houses are opened and gratuitous relief given to the infirm. On the advent of the rains the people are moved from the large works to small works near their villages, liberal advances are made to agriculturists for the purchase of plough, cattle and seed. When the principal autumn crop is ripe, the few remaining works are gradually closed and gratuitous relief ceases. All this time the medical staff is kept in readiness to deal with cholera, which so often accompanies famine, and malaria, which generally supervenes when the rains break. Recent experiences go to show that never again will the Government of India be compelled to distribute relief on the tremendous scale demanded in 1899-1900. The high prices of produce have given the cultivators considerable resources, the extension of irrigation has protected a larger area, and labour has become more mobile, utilising to the full the increasing industrialism of the country. For instance, in 1911 the rains in Gujarat failed completely, yet there was little demand for relief works, and the necessities of the cultivators were rather for fodder for their cattle than for money or food for themselves. Various schemes are now under consideration for the establishment of fodder reserves in the villages.

Famine Protection.

Side by side with the perfection of the machinery for the relief of famine has gone the development of famine protection. The Famine Commission of 1880 stated that the best, and often the only means of securing protection from the extreme effects of famine and drought, are railways and irrigation. These are of two classes, productive and protective. Productive works being estimated to yield profits which will pay interest and sinking fund charges are met from loans; protective works, which do not pay, directly from revenue. In order to guarantee that there should be continuous progress with protective works, the Famine Insurance Grant was instituted in 1876. It was decided to set apart from the general revenues Rs. 1½ crores annually, or one million sterling. The first charge on this

grant is famine relief, the second protective works, the third the avoidance of debt. The chain of protective railways is now practically complete. Great progress is being made with protective irrigation. Acting on the advice of the Irrigation Commission (*qv*) an elaborate programme of protective irrigation works is being constructed, particularly in the Bombay Deccan—the most famine susceptible district in India—and in the Central Provinces. When these are completed, the shock of drought will be immensely reduced.

The Indian Famine Trust.

Outside the Government programme there is always scope for private philanthropy, especially in the provision of clothes, help for the superior class poor who cannot accept Government aid, and in assisting in the rehabilitation of the cultivators when the rains break. At every great famine large sums have been subscribed, particularly in the United Kingdom, for this purpose, and in 1899-1900 the people of the United States gave generous help. With the idea of providing a permanent famine fund, the Maharaja of Jaipur gave in 1900 a sum of Rs. 16 lakhs, in Government securities, to be held in trust for the relief of the needy in time of famine. This Trust has now swollen to Rs. 30 lakhs, chiefly from gifts by the founder's family. It is vested in trustees drawn from all parts of India, and is freely used in an emergency.

The Cost of Famine.

The fruits of this policy are revealed in a return on the last serious famine which has occurred in India. In the United Provinces the failure of the 1913 monsoon, followed by poor and unseasonable cold weather rains, led to a widespread failure of crops affecting an area of 18,200 square miles and a population of 6 millions, but the prosperity of the preceding years had enabled the population to develop a far greater staying power than on previous occasions of famine, nor was the rise in food prices so marked. Government made loans to cultivators amounting to over £1,250,000, besides suspending land revenue and sanctioning remissions amounting to over £717,000. The necessity for direct measures of relief did not arise till December, which is considerably later than on previous occasions of famine. The cost of direct relief operations to Government, including provision of cattle-fodder, was about £382,000, a far smaller figure than in the famine of 1907-08, although the estimated loss of food-grains was almost as great. The Public Works Department, the civil authorities, and district boards arranged for the carrying out of numerous projects with famine labour. These comprised construction of roads, tanks and irrigation works and the reclamation of ravine land—all works of undoubted utility. Gratuitous relief amounted to £80,600; it was given principally to persons incapable of working. A marked feature of the famine was the extreme scarcity of fodder, which was met chiefly by concession rates for the carriage of fodder on railways and the supply of hay from the forests. Much good work was done by non-official efforts, and a

charitable fund was raised to the amount of £27,424. The total cost of the famine to Government is estimated at £820,000, as against £2,130,000 in 1907-08. Good rains in July and September 1914 finally relieved the situation and ensured a good kharif crop. There was a widespread failure of the rains in 1918,

but it is too early to estimate the economic results. No general report on the subsequent famine conditions has been issued, but it may be affirmed that, owing to improved communications and the better economic condition of the people, the effects of the famine were less severely felt than on previous occasions.

BOY SCOUTS.

The Boy Scouts movement, initiated in England by Lt.-Gen. Sir Robert Baden Powell (the Chief Scout), has spread widely in India, and the Boy Scouts Association has received the patronage of the Viceroy and the heads of the local governments. The aim of the Association is to develop good citizenship among boys by forming their character—training them in habits of observation, obedience and self-reliance—inculcating loyalty and thoughtfulness for others—and teaching them services useful to the public and handicrafts useful to themselves.

The following division of duties of the Indian Headquarters is officially published for information:—The Hon. General Secretary deals with all matters of organisation and discipline, including the issue of Warrants to new local Associations and Officers, also the registration of new troops, which should be applied for on Form C, obtainable from the General Secretary. Recommendations for awards of Life Saving Medals and Certificates should be made to him and also all applications for exemption from the swimming test for 1st class (Regulation 21) and all correspondence on the subject of Challenge Trophies. Owing to the war the movement in India has suffered considerable dislocation and embarrassment. Fifteen new associations were formed during 1914-15 but six others are temporarily in suspension. The latest annual report gives the following details of a census of Boy Scouts

Associations in India:—Local Associations, 43. Troops, 99. Scout Masters, 90. Assistant Scout Masters, 26. Scouts, 2,161. Wolf Cubs, 180. Grand Total, 2,457.

He also deals with routine matters, official publications, sale of badges, and also all matters connected with the official publication, *The Boy Scouts Gazette of India*. Local Secretaries can communicate with him direct on these matters and it is not necessary to refer to the Commissioners on such subjects.

The *Boy Scouts Gazette of India* published monthly, is the official organ of the Movement in India and in it are notified all official notices and orders issued by the Indian Headquarters. It is obtainable from the General Secretary. Subscription Rs. 6-8-0 per annum.

HEADQUARTERS STAFF IN INDIA.

Offg. Chief Commissioner—A. D. Pickford, 2, Hare Street, Calcutta.

Assistant Chief Commissioner—W. P. Milsted, War School, Naini Tal.

Hony. General Secretary—St. George Jackson, Bar.-at-Law, 1 Clyde Road, Lucknow.

Hony. Treasurer—E. E. Savi, Alliance Bank of Simla, Calcutta.

Bankers.—The Alliance Bank of Simla, Calcutta.

The Co-operative Movement.

More than sixty per cent. of the vast population of India subsists on agriculture and the majority of these millions generally live, under present conditions, from hand to mouth. The ryot's occupation is healthy and productive, and he is proverbially honest and straightforward in his dealings, except when years of famine and hardship make him at times crafty and recalcitrant. Owing to his poverty, combined with deficiency in education and consequent lack of foresight, however, he has to incur heavy debts to meet occasional expenses for current seasonal purposes, the improvement of his land, or for ceremonial objects, and he has therefore to seek the assistance of the local money-lender, known as the Sowkar or the Mahajan. The rate of interest on such advances though varying from province to province and even in different parts of a province is generally very high. In addition to charging excessive rates the Sowkar extorts money under various pretexts and takes from the needy borrower bonds on which heavy stamp duties are payable. One of the chief causes of the ryot's poverty is, that owing to the absence of security and his short-sightedness due to want of education, he does not as a rule collect and lay by his savings, but fritters away his small earnings in extravagant and unproductive expenditure on the purchase of trinkets and ornaments and on marriage and other ceremonies. In some cases, he hoards coins under the ground with the likelihood that on his death the money is lost to his family for good. This absence of thrift and the habit of dependence, in case of difficulty, on the Government or on the Sowkar are the bane of his life. There is besides a total absence of ideals or desire for progress. A co-operative society would change all this, inasmuch as it would provide him with a suitable institution in which to lay by his savings and would teach him the valuable lesson of self-help through the sense of responsibility he would feel in being its member. Thus the chronic poverty and indebtedness of the Indian agriculturist afford a very good field for the introduction of co-operative methods, especially as his work is of a productive character likely to enable him to earn a better living under circumstances more favourable than they are at present.

Genesis of the Scheme.—The question of improving rural credit by the establishment of agricultural banks was first taken up in the early nineties when Sir W. Wedderburn, with the assistance of the late Mr. Ranade, prepared a scheme of Agricultural Banks which was approved of by Lord Ripon's Government but was not sanctioned by the Secretary of State. The matter was not again taken up until about fifteen years later when Lord Wenlock's Government in Madras deputed Mr. F. A. (now Sir Frederick) Nicholson, to report on the advisability of starting Agricultural and other Land Banks in the Presidency for the relief of the agriculturists. There was an indigenous system of banking available for the person of small means. This institution called the *Nidhi*, corresponded in some respects to the Provident Funds and Friendly Societies in European countries. Though these institutions provided

cheap capital to the agriculturists the spirit of co-operation was lacking in them. Sir Frederick, submitted an exhaustive report to Government suggesting that the formation of co-operative societies afforded an excellent means for relieving rural indebtedness. The report surveyed the growth of the co-operative movement in European countries, the conditions favourable to its development in India, if introduced, and the difficulties to be encountered in introducing it and making it a success here. Finally, it contained, for the consideration of Government, a draft Bill for the organization of Co-operative Societies. Sir Frederick pleaded for concessions to be given to the societies—such as exemption from the income-tax and remission of the stamp duty—as he felt that it would be possible to attract the people to the new movement only if Government showed its active sympathy towards it at the commencement. He ended with a fervent appeal to the non-official community “to find a Raiffeisen” who would help the ryots of this country in achieving results equal to those obtained by Raiffeisen's noble efforts in Germany. Unfortunately the report was not received favourably either by the non-official public or by the Government of Madras, and no action was taken on its suggestions.

Famine Commission of 1901.—The next few years saw two of the worst famines that India had ever suffered from, and in 1901, Lord Curzon appointed a Commission to report on the measures to be adopted in future to prevent famines and to protect the ryot from their ravages. The Commission laid stress on the proper working of the Agriculturists' Loans and the Land Improvement Loans Acts under which *takan* advances are made to cultivators. This system was given a long trial in the years previous to the great famines as well as during the ten years succeeding the 1899-1900 famines. But it is acknowledged on all hands that the system has not been successful in solving the problem of rural stagnation as it is clear that it is not facility for obtaining cheap capital alone which will raise the agriculturists and relieve him from his debts, but the provision of capital combined with the inculcation of habits of thrift and self-help. The Commission also recommended that the principal means of resisting famines was by strengthening the moral backbone of the agriculturist and it expressed its view that the introduction of co-operation in rural areas might be useful in securing this end.

Co-operative Credit Societies' Act.—These recommendations induced Lord Curzon to appoint a Committee with Sir Edward Law at its head to investigate the question and a Report was submitted to Government recommending that co-operative societies were worthy of every encouragement and of a prolonged trial. Sir Anthony (now Lord) Macdonell and others were at the same time making experiments on similar lines in the United Provinces and the Punjab with satisfactory results. All these activities, however, took an organized shape only when Lord Curzon's Government introduced in the Supreme Legislative Council a Bill to

provide for the constitution and control of Co-operative Credit Societies. The main provisions of the Bill which became the Co-operative Credit Societies' Act (Act X of 1904) were :—

(1) That any ten persons living in the same village or town or belonging to the same class or caste might be registered as a Co-operative Society for the encouragement of thrift and self-help among the members.

(2) The main business of a Society was to raise funds by deposits from members and loans from non-members, Government and other Co-operative Societies, and to distribute money thus obtained by way of loans to members or with the special permission of the Registrar, to other Co-operative Credit Societies.

(3) The organization and control of Co-operative Credit Societies in every Presidency were put under the charge of a Special Government Officer called the Registrar of Co-operative Credit Societies.

(4) The accounts of every society were to be audited by the Registrar or by a member of his staff free of charge.

(5) The liability of a member of a society was to be unlimited in the case of a Rural Society.

(6) No dividends were to be paid on the profits of a rural society, but the profits were to be carried at the end of the year to the Reserve Fund, although when this fund had grown beyond certain limits fixed under the bye-laws, a bonus might be distributed to the members.

(7) In the case of Urban Societies no dividend was payable until one-fourth of the profits in a year were carried to the Reserve Fund.

Soon after the passing of the Act the local Governments in all the Presidencies and major provinces appointed Registrars with full powers to organise, register, and control the Management of societies. In the early stages of the working of this Act, Government loans were freely given, and the response to the organising work of the Registrars was gradual and steady throughout most parts of the country.

Co-operative Societies' Act—As co-operation progressed in the country defects were noticed in the Co-operative Credit Societies' Act and these were brought to the notice of Government by the Provincial Conferences held under the auspices of Local Governments in various Presidencies, as well as by the Annual Conferences of the Registrars. In two directions the need for improved legislation was especially felt. In the first place, the success of credit societies had led to the introduction of co-operative societies for distribution and for purposes other than credit for which no legislative protection could be secured under the then existing law. And in the second place, the need for a freer supply of capital and for an improved system of supervision had led to the formation of various central agencies to finance and control the original credit societies and these central agencies ran all the risks attendant on a status unprotected by legislation. The Government of India, recognising

the need for removing these defects, decided to amend the old Act, and a Bill embodying the essential alterations proposed was introduced in the Imperial Legislative Council, and after a few amendments it emerged from the Council as the Co-operative Societies' Act (II of 1912) replacing Act X of 1904. The outstanding features of the new Act were as follows :—

(a) It authorised the formation of societies for purposes other than credit, which was possible under the old Act only with the special permission of the Local Government. This extension of Co-operation to purposes other than credit marks an important stage in its development in India.

(b) It defined in precise terms the objects for which Co-operative Societies could be organised.

(c) It removed the arbitrary division of societies into Rural and Urban and substituted the more scientific division in accordance with the form of liability adopted.

(d) It facilitated the growth of central agencies by insisting on a limited liability by means of a special clause about the registration of a society one of whose members is a registered society.

(e) It empowered the Local Government to frame rules and alter bye-laws so as to put restrictions on the dividends to be declared by societies and allowed them the discretion to sanction distribution of profits in the case of unlimited liability societies to their members.

(f) It allowed societies with the permission of the Registrar to contribute from their net profits, after the Reserve Fund was provided for amounts up to 10 per cent. of their remaining profits to any charitable purpose as defined in the Charitable Endowments' Act. This kept the movement in touch with local life by permitting societies to lend assistance to local educational and charitable institutions.

(g) It prohibited the use of the word "Co-operative" as part of the title of any business concern except a registered society.

Composition of the Capital of Agricultural Societies.—On the organization of agricultural credit was necessarily concentrated the attention of the promoters, for it presented a far more important and far more difficult problem than industrial credit. There was a great variety of types among the agricultural societies started in different provinces, and some Registrars adopted the "Schulze-Delitzsch," some the "Raiffeisen," and some the "Luzzatti" methods in their entirety. The commonest type, as in the Punjab, Burma, and the United Provinces, is the unlimited liability society with a fee for membership and a small share capital, the share payments to be made in instalments. In some cases the system insists on compulsory deposits from members before entitling them to enjoy the full privileges of membership. The system in Bombay, Bengal, and the Central Provinces is entirely different, there being no share-capital but only a membership-fee. Part of the working capital is raised by deposits from members and other local sympathisers, but the bulk of it is obtained by loans from Central and other co-operative

societies. In all the Presidencies, the Government set apart in the initial stages every year a certain sum to be advanced as loans to newly started co-operative societies, usually up to an amount equal to the deposits from members, raised by a society. State aid in the form of money does has now become an exception rather than the rule, and this withdrawal in no way hampers the development of the movement on account of the rapid increase of Co-operative financing agencies and the growth of public confidence in the primary societies. For agricultural societies generally, the main sources of capital are shares, deposits of members, deposits from non-members and loans from central Societies.

Constitution of Agricultural Societies.—

The typical Agricultural Society in India corresponds to the "Raiffeisen" society, the management being gratuitous, the profits indivisible, and the area of work limited. In the Punjab, the United Provinces and Burma where shares form an integral part of the system, the distribution of a portion of the profits after ten years working is permitted under certain restrictions. Usually, the secretary gets a monthly pay of Re. 1 to Rs. 5 with a bonus at the end of the year equal to a fourth of annual profits. In parts of the country there are villages where a few literate men may be found but most of these are hardly fit enough to undertake the responsible work of a secretary, being practically ignorant of account keeping. In such villages either the village school-master or the village accountant is appointed secretary. In some places, where a suitable person is not available on this low pay neighbouring societies are grouped together with a whole-time, well-paid secretary. This arrangement, which has its advantages, involves the drawback that the outsider working as secretary does not naturally feel as much interest about the society's working as a *bona-fide* member does and is less amenable to the control of the members. As the work of societies develops, the need for trained secretaries is being felt more keenly for it is now realized that the function of a secretary does not consist merely in writing the accounts correctly. With a view to meet the demand for trained secretaries, a training class has been organized in Bombay for the last few years and the work has been placed on a systematic basis by the new educational and propagandist Institute. Junior classes are held in areas which are developed co-operatively and the senior classes are held in Bombay. More than two hundred men will under the new arrangements obtain training every year. Lectures are delivered at the class on the details of the work of co-operative societies and on the main principles of co-operation. This interesting experiment deserves to be copied in other parts of the country. Instruction for secretaries on similar lines is being organized now in most provinces particularly in Bihar and Orissa, in the United Provinces and Bengal.

Internal Management of Societies.—The managing committee of a society consists of 5 to 9 members of the society, the chairman being usually the leading person in the village. The daily work of the society is carried on by the secretary, but the managing committee

supervises the work and has alone the power to admit new members, to receive deposits, arrange for outside loans, grant loans to members and take notice of defaulters. The accounts of the society are kept by the secretary and the necessary forms, papers, and books are usually supplied from the Registrar's office to simplify the work of the secretary. The books are kept according to the rules framed by the Local Governments and are open to inspection by important local officials and the Registrar and his staff. The accounts are audited, at least once a year, by the auditors working under the Registrars of Co-operative Societies and the Societies are inspected from time to time by honorary or paid inspectors. The loans are mostly given on the security of two co-members. Under the Act, Societies are allowed under certain conditions to advance loans on the hypothecation of moveable or immovable property and there is nothing unco-operative in this so long as personal security which is the central principle of co-operation is given and the borrower's property is recognized as only a secondary or collateral protection. Mortgages are taken occasionally, especially in the case of long term loans and loans for the liquidation of old debts.

The supreme seat of authority in co-operative societies is the general body of members assembled in general meetings. At the annual general meeting held at the close of the co-operative year, the accounts are submitted, the balance-sheet passed, and the managing committees with the chairmen and secretaries are elected. The general meeting fixes in some provinces the borrowing limit of individual members, lays down the maximum amount up to which the Managing Committee may borrow during the ensuing year, dismisses members for misconduct or serious default, and settles the rates of interest for loans and deposits. As these meetings are informal, other local topics of public utility are sometimes discussed. All the net profits of the society are annually carried to the Reserve Fund, which is indivisible, that is, incapable of distribution as dividend or bonus, which cannot be drawn upon without the sanction of the Registrar, and which must be invested in such a manner as the Registrar prescribes. It is intended to meet unforeseen losses and to serve as an asset or security in borrowings. Except in the Central Provinces and Madras, the Reserve Funds of primary societies are generally utilised as an addition to their working capital, though steps are being taken in some parts of the country to stop this practice and to insist on the Reserve being kept entirely apart from the working capital and invested in Government securities or placed as floating deposits in reliable Central Banks. The Government of India state in their Resolution of 17th June 1914 "that while there may be advantages in the earlier stages in using the Reserve as part of the working capital of the society, it should gradually, as it becomes more important, be set apart for separate investments." The Eighth Conference of Registrars held in 1918 has also accepted this view. The general trend of opinion seems to be that primary societies should be free to utilize their reserve funds as part of the working capital

except when they have considerable outside deposits and have not made special arrangements in respect of fluid resource to cover such borrowings.

Main defects.—The main defects of primary societies may be summarized. The most prominent is the evil of unpunctuality. This is due more to easy going ways of life and the narrowness of margin between income and expenditure rather than to recalcitrancy. Next is the frequent apathy of the members in the work of the societies owing to lack of education and absence of higher ideals. The general body leaves affairs at the mercy of the committee and the committee transfers its powers to the chairman, secretary or some other member. Then there is the objectionable practice of making book adjustments and taking *benami* loans. A grave defect is the inability of the societies to act as real banks, receiving money when presented and granting loans on demand according to actual requirements. In many a society, activity is displayed only twice in the year, once during the cultivation season when loans are advanced and again after harvest time when recoveries are collected.

Non-agricultural societies.—Non-agricultural societies, have grown up in towns and cities for improving the economic and moral condition of persons engaged in handicrafts and cottage industries, of artisans and small traders, members of particular castes and employees and of big firms and Government departments. Non-agricultural societies, except those for handicraftsmen, artisans, and persons of the poorer classes, referred to later, have usually a limited liability. This is due partly to the absence of any assets in real property among their members, but mainly to the field of their work not being compact as in the case of agricultural societies, where every member may be expected to know every other member. Their constitution is based on the 'Schulze Delitzsche' model and in most cases the management is honorary, though sometimes, when the sphere of society's work is extended, a paid staff is employed. There is in all societies a substantial share capital, payments being made in instalments, and the rest of the working capital is obtained by local deposits from members and others. Loans from co-operative and Joint Stock Banks usually form only a meagre portion of the capital. Of the total working capital of roughly Rs. 1,47,00,000 Rs. 30,00,000 represent loans and deposits from non-members, Rs. 1,41,000 loans and deposits from other societies, Rs. 12,01,000 loans from Provincial or Central Bank, Rs. 41,00,000 deposits from members, Rs. 51,00,000 share capital, Rs. 9,21,000 reserve fund and Rs. 57,000 State aid. At the end of every year one-fourth of the net profits must be carried to the reserve fund and the balance may be distributed as dividend or bonus. There are a few serious drawbacks in the working of these societies and complaints about them are noticeable in many of the Registrars' annual reports. The most serious of these complaints are that the spirit of co-operation is lacking in many non-agricultural societies, that there is too great a desire to go in for profits and dividends and a growing tendency to make the societies close preserves once they have started running on profitable

lines. The rates of interest on loans are at times higher than they ought to be, and the men at the head of the societies are loth to admit new members who are in need of loans for fear of the latter cutting down the profits.

Included in this group are communal societies, and societies of employees of firms, railway companies, and Government offices. There are again, a few societies organized on the lines of the village Popular Banks of Europe to assist small non-agricultural traders and artisans in towns and there are also some societies comprising members of particular communities. Some of the larger non-agricultural societies, after meeting the needs of their members, have large balances on hand, which they are allowed, with the previous sanction of the Registrar, to advance to smaller primary societies.

With the growth of industrialism and the development of cities an important labouring class has grown up in big industrial towns and this class is as deeply indebted and as badly remunerated as the agriculturists. Co-operation, if introduced among people of this class, would open a new life to them besides being the means of their economic regeneration. No systematic efforts have hitherto been made in this direction, as urban co-operation has so far been confined more or less to middle class people. The first experiment was initiated in Bombay under the auspices of an organization known as the Debt Redemption Committee. Some work in this direction has also been done in Madras, particularly among the depressed classes. The Social Service League of Bombay has also lately started several promising societies among factory workers. Those Societies, if successful, may become the forerunners of a healthy Trade Unionism in India.

Loans advanced.—The total amount of loans advanced to members by agricultural and non-agricultural societies during the year 1916-17 were Rs. 2,27,92,656 and Rs. 1,11,32,262, respectively, as against the total of less than Rs. 25 lakhs issued by both these classes of societies in the year 1906-7. As the movement progresses, it is being more and more realised that the early clearance of a member from previous debts after his admission to a society is very desirable and greater attention is being bestowed by the Registrars on this question. It is impossible to insist on the restriction of loans to productive objects and there are circumstances under which unproductive loans are permissible and even advisable. What should be and generally is borne in mind is that precautions are taken by societies that the expenditure is inevitable and that it is not excessive in amount. The chief objects of the loans advanced are cultivation expenses, purchase of live-stock, fodder, seed, manure and agricultural implements, payment of rent, revenue or irrigation dues, land improvement and sinking of wells, purchase of new lands, and personal maintenance in times of scarcity in agricultural societies, and for purchase of raw materials for industries, for trade, for house-building and for food and other necessities of life in non-agricultural societies. The terms of the loans are one year

or less on those for current needs, whether for agriculture or petty trade, and up to five years or so on loans for liquidation of old debts or for land improvement. An unsatisfactory feature of the co-operative system in some of the Provinces is the laxity and unpunctuality in the matter of repayment of loans by members and a general apathy in the matter on the part of societies. As co-operation is both financially and educationally a failure unless promptitude of payment is ensured, no efforts are spared by organizers to educate societies in this respect. The Co-operative Societies' Act grants to societies priority of claim against other creditors (except the State or the landlord) to enforce any outstanding demand due to the societies from members or past members upon the crops or other agricultural produce, and upon the cattle, fodder or agricultural implements, in cases where loans have been advanced for the purposes specified. But not content with this, some co-operators have pleaded for special powers of recovery of loans under which overdue loans may be recovered as arrears of land revenue. Most local Governments have framed rules under the Act enabling the Registrar to refer disputed claims to arbitration and to enforce the award of the Registrar in the same manner as a decree of the Civil Court. It is not likely that Government will sanction a special process under which claims against defaulting members may be recovered according to procedure allowed for the recovery of arrears of land revenue. For the existence of a special privilege of this character cannot but lead to laxity in the selection of members and carelessness in the granting of loans and in securing regular repayments on them. Demand for a special procedure for the recovery of the dues of a cancelled society stands on a somewhat different footing and the Local Governments of Bengal, and Bihar and Orissa have already passed enactments enabling the contribution levied by the liquidator of a cancelled society to be collected in the same manner as arrears of land revenue on an application being made in that behalf by the Registrar of Co-operative Societies. Legislation on similar lines is contemplated in Bombay, the Central Provinces and the United provinces.

The Financing of Agricultural Societies.—As soon as the initial stage of the movement had passed, a very urgent problem had to be faced. This was to finance the agricultural societies that were growing in all directions. And the problem was solved in different provinces according to the special conditions and the stages of development the movement had attained therein. In Madras a Central Bank, which lent to Co-operative Societies in the Presidency, was started without Government aid as early as in 1917. This was followed by the starting of banks at district head-quarters. In other Presidencies, district and taluka banks were established making good the deficiency in the local capital of the societies within their districts, and in some places Joint Stock Banks were persuaded to make advances direct to agricultural societies or through the medium of local Central Banks. A large number of prosperous non-agricultural societies, as stated above, could afford to lend to agricul-

tural societies. Government aid was also freely given. With the progress of the movement, however, this aid was discontinued. In Bombay there was no movement to start local financing agencies and the very slow progress of the movement made it difficult for central banks with a restricted area of operations to work successfully. Accordingly the Bombay Central Co-operative Bank was founded in 1911, with a share capital of Rs. 7 lakhs and with power to issue debentures at 4 per cent. up to three times the amount of the paid-up share capital, the Government guaranteeing payment of interest on the debentures till their repayment. The Bank was authorised to lend only to registered co-operative societies all over the Presidency with the previous sanction of the Registrar in the case of every individual loan. As an indirect result of the establishment of the Bombay Central Bank, a number of district banks have since been started in the Presidency.

The drawback of the Bombay and the Madras Central Banks is that neither is a co-operative Apex Bank in the true sense of the term. In the Bombay Central Bank, co-operative societies are now encouraged to become members and may be expected gradually to assist in shaping its general policy. The Madras Central Bank has been recently converted their Bank into a Provincial Bank on sound co-operative lines. A Provincial Bank with four Central Banks affiliated to it is in existence in Upper Burma, and this Bank finances primary societies either through the affiliated local banks or through the guaranteeing of unions composed of societies. An Apex Bank has been started in the Central Provinces to form an immediate link between the district banks in the Province and the Commercial Banks in Allahabad and elsewhere. It has worked well and its success led to the establishment of a Provincial Bank with a similar constitution in Bihar and Orissa. A scheme has also been set afoot for having a Provincial Apex Bank in Bengal, where, as also in Bihar and Orissa, the primary societies are at present financed by Central Banks at district or taluka head-quarters. A Provincial Federation of Central Banks has for the present been started transferring to itself the deposit liabilities of local banks, and distributing these according to requirements. The Federation also acts as the balancing centre for the province and provides fluid resource to affiliated banks. In the United Provinces primary societies are financed on the same system, and there, too, the starting of a Provincial Apex Bank under which Central Banks will be federated is under contemplation. The Punjab has a local central banking system and though sooner or later it, too, will have an Apex Bank, no definite proposal for the establishment of such Bank has yet matured. A provincial union has, however, been recently started which will work as a financial federation for the local banks in the province and facilitate mutual aid between them till an Apex Bank comes into being.

The constitution of Central Banks is not uniform, but the existing Banks may be classified under three general heads:—(1) Banks of which the membership is confined to in-

dividuals or where societies are admitted as members on exactly the same footing as individuals, (2) Banks of which the membership is confined to societies, and (3) Banks which include societies and individuals as their members and secure to societies separate representation on the Board of Directors.

Functions of Central Banks:—The functions of Central Banks are to balance the funds of Societies and to supply capital. But their duties are not limited to the provision of banking facilities only, but often include the organisation and supervision of societies. Hence where the Central Banks are not formed on a capitalistic basis, they perform the functions of supervision and control of the Societies affiliated to them, and in some Provinces they also organise new Societies and even take up the entire educational work now done by the Registrar. Usually the Central Banks is only possible for the whole of a district, as the personnel necessary for its successful working would be difficult to secure in a smaller area. However, in different parts of the country we notice the existence of Central Societies for *talukas* and occasionally for smaller tracts. An important class of institutions included under the statistics of central societies are unions which may be described as federations of societies which are maintained for supervision, either combined or not with the assessment or guarantee of loans to primary societies, and which do not undertake banking business. These unions have a very restricted area of operations, within a radius of five to eight miles from a central village. They are accepted as integral parts of the provincial organization in Burma and the Central Provinces, in one case serving as a link between primary societies and the provincial bank and in the other between primary societies and local banks. The system has also been extended to Bombay and Madras, though in the last named province no guarantee is undertaken by those bodies.

Organization and Propaganda:—It may be mentioned that in most of the provinces the work of organising and looking after the societies is done by the Registrar with the help of assistants and a few honorary non-official workers. Where the Central Bank system has properly developed, the Directors of the Central Bank either themselves or through a paid agency organise societies and, as stated above, supervise their working. The number of honorary workers is steadily increasing and in some Presidencies there is a staff of specially-appointed honorary organisers who regularly assist the Registrars. The activities of the honorary workers are often, however, spasmodic and unorganized, and in most of the major provinces the need has been felt for some co-operative institution which will co-ordinate and systematize the efforts of non-official workers, and place them on a responsible basis. This might take the shape of organisation societies or federations on the lines of similar institutions in Germany, England and Ireland. Such institutions carry on active educational propaganda and through the agency of local committees and groups of workers, assist in the organization of new societies and attend to their supervision. Arrangements can also be possible for the carrying on the audit of

societies—for which Government cannot continue to increase the official staff to an unlimited extent—on payment of some fixed contributions. Finally such federations should have the final voice in the determination of policy, and subject to the statutory powers of the Registrar gradually take over the control of the co-operative organization in a province. In the Central Provinces there has been for some years a federation of Co-operative Banks which promises to develop into a truly co-operative organising and controlling agency. The federation provides a regular and efficient system of supervision, audit and control, arranges for the training of the federation staff, attempts to secure uniformity of practice among co-operative institutions and to promote their interest and fosters the spread of co-operation by active propaganda. A Provincial Union has also been started in Madras, but its objects are mainly educational and propagandist. Its activities are at present confined to the issuing of co-operative journals and the holding of conferences. A Central Institute to focus the efforts of co-operative workers and to carry on propagandist work has lately been established in Bombay. The objects of this institution are to develop the movement in the Presidency, by promoting the study of co-operation and by co-ordinating the activities of several existing propagandist and organization agencies. The institute has no powers of control, though it is expected to ascertain and represent the views of co-operators on questions affecting the movement. Organization will be undertaken primarily in the City of Bombay. The activities of the Institution carried on through various sub-committees, and some of these have already done much useful educational propagandist work. In Bengal a similar propagandist organization has been started with identical aims. The Society has undertaken much of the educational and propagandist work hitherto performed by the Co-operative Department, and has assisted in the organization of co-operative stores among students in colleges. It has opened branch centres and projected a comprehensive scheme for the training of members of village societies and their Secretaries. A federation with a constitution more or less similar to that of the Central Provinces Federation has been lately registered in Bihar and Orissa, while in the Punjab a provincial union was organized during the year for conducting the audit of primary societies and undertaking general propagandist work. In Burma the audit of primary societies is conducted by a central committee consisting of important Departmental officials and representatives of co-operative institutions. Organization, supervision and propaganda are furthered by district federations of unions of primary societies. These are all recent developments and it is still too early to forecast on what lines the transfer of control to representative co-operative agencies will be carried out.

Other forms of Co-operation.—After the passing of the amended Co-operative Societies' Act the application of co-operation to purposes other than credit was greatly extended, but it is only during the last few years that a general demand for productive and distributive, pur-

chase and sale co-operative societies has exhibited itself. At the end of the year 1918-19, there were very few store societies in the country. In all provinces, particularly in Madras, some beginning had been made in the direction of distributive co-operation among the middle classes, while in Bengal and the United Provinces some attention had been devoted to the starting of stores for students living in hostels attached to Colleges. The movement, has however, now begun to obtain popular favour in view of the increasing prices of the daily necessities of life, and the profiteering which assumed serious proportions at the close of the War. Co-operators in the provinces of Madras, Bombay, and the Punjab have attempted earnestly to tackle the evil by organizing supply unions, stores, societies, and distributive departments attached to credit societies, and in all the three provinces some steps are contemplated for obtaining cheap, wholesale supplies for the various distributive organizations. In some Provinces efforts have been made to revive the ancient handicrafts of the country and cottage industries by organising co-operative societies for the workers. Many of these societies merely provide cheap credit, but in some places they undertake the supply of raw material and the sale of manufactured goods. An important industry which flourished in India before the introduction of machinery was handloom weaving and efforts have been made to revive it by the formation of productive co-operative societies of handloom weavers. Most of the weavers' societies are not merely credit societies, but undertake the purchase of good yarn for members, and in some cases have store branches to sell the cloth produced by them. They have also been instrumental, prominently in Bombay, the United Provinces, and the Central Provinces, in introducing improved looms and methods amongst the conservative weaving classes. Other industrial societies to be found in very small numbers here and there are those for "gadoes" or milkmen, dyers, basket and brass workers in the Central Provinces, "Chammars" and "Dhers" in Bombay and Punjab, lacquerware workers, carpenters, wood carvers, blacksmith and potters. The Indian Industrial Commission in the course of their inquiries devoted some attention to the development of small and cottage industries and the possibility of reviving them by the introduction of co-operation. Their recommendations on this subject are not very definite. State loans for purchase of costly plant or machinery are, however, recommended, and emphasis is laid on the necessity of arranging facilities for the marketing of products of home industries. The first step to industrial co-operation is to be taken by familiarizing workers with the principles of co-operative credit, though later on separate non-credit institutions would become necessary. Suggestions are made for technical guidance to workers, and the local departments of industries are advised to keep workers constantly informed about the demands of the markets. Organization of industrial societies is to be a function of local departments of industries, but as that will be engaged with problems of big industries, it is doubtful of the cottage and small industries will have

much scope for development under the new regime.

Nearly ten Housing Societies have been started in Bombay. They are organized on the co-partnership system, under which the Society owns the houses and lets them to members at fixed rents. The scheme is feasible for such section of the middle classes as can provide a certain proportion of the initial capital. There are some Building Societies* in Madras and a few more in Mysore and in the former, the movement seems to have gained a firm footing.

The province of Burma is a pioneer in the matter of cattle insurance, and to support the village insurance societies which have been started in the province, there has been organized a central re-insurance society, which receives some financial backing from Government. In other provinces co-operative insurance for cattle has made little or no progress.

Agricultural Co-operation.—Agricultural societies have until recently been engaged only in supplying cheap credit to their members, but there are various other fields of work to which they may extend their activities. Grain Banks may be started with advantage, receiving deposits in kind and allowing these to accumulate to be sold at profitable rates or distributed to the members in times of scarcity. Such banks have been started in Bombay, Madras, and Bengal. Societies on a similar principle for the storage of fodder may assist in solving what is likely to become in the near future an important problem in rural economy. Another direction in which the co-operative principle is being adopted is the starting of societies for purchase of and distribution among members of good unadulterated seed. A number of small seed societies have been organized in the Bombay Presidency and in the Central Provinces and Berar, the work appears to have been particularly well organized. Societies for the co-operative purchase and sale of manure will also prove a great boon, and a few such stores have been established in Madras, Bengal and Bombay.

Co-operative Societies for the joint sale of produce are becoming popular as co-operative credit thrives and agriculturists become less dependent on local traders. While Burma led the way by starting societies for the joint sale of paddy, the most interesting developments in the direction have taken place in Bombay. Societies for the sale of agricultural commodities, chiefly cotton and jaggery have been started in several districts in the Deccan and the Karnatak. This aspect of co-operation has lately attracted considerable attention and attempts similar to those made in Bombay are contemplated in Madras and the Punjab. It will indeed be a great achievement if these efforts are successful and the cultivator obtains adequate returns for his produce. At present he buys in the dearest market and sells in the cheapest. But if co-operative purchase and sale show good progress, his economic position will be much improved. In addition credit societies and central banks, in many parts of the country again, arrange for the joint sale of produce. In some

places credit societies undertake the joint purchase of agricultural implements for members, while in others separate registered societies are started for the purpose. Where the system of Central Banks has developed this work is taken over by these Banks for the Societies affiliated to the Banks.

Efforts have been made in some parts of the country to solve the problem of milk-supply—to reduce the price and increase the purity—by starting co-operative dairies, composed either totally of gaolis or milkmen or the producers and the consumers together. Co-operative creameries and ghee producing societies have also been started in one or two provinces. Another interesting development is the starting of cattle-breeding societies in the Central Provinces and elsewhere. It is anticipated that these societies will assist in supplying the keen demand that exists for bulls of good stock. In several provinces there are Societies for rice-hulling, the manufacture of jaggery and for lift irrigation. Ginning on co-operative lines has also been attempted.

Government has of late made attempts to bring the co-operative movement in close touch with the Agricultural Department. Co-operation has already been successful to a considerable extent in redeeming the chronic indebtedness of the agriculturist, but if the improvement in his economic condition is to be permanent it is essential that he should be prevailed upon to adopt improved methods of production. The Agricultural Department does undertake propagandist work with this object, but its efforts have not proved as successful as they ought to be. A co-operative society provides just the effective agency to reach the agriculturists, and in many places societies have been the means of bringing home to the agriculturist the need for improved methods and have been made the centres for the propagandist activities of the Agricultural Department and District Agricultural Associations. As a result, a few societies have been enterprising enough to purchase modern agricultural implements, and the machinery recommended by the Department and to use the proper manures and the certified varieties of seeds. "Wherever agriculture and co-operation have experienced the assistance which each can derive from association with the other they are fast developing a truly organic connection." If the reorganisation of Indian agriculture grows apace with the spread of co-operation, there is no doubt that rural India will soon present a happier outlook than it does now.

Committee on Co-operation in India.—In July 1914, the Government of India issued a lengthy Resolution on co-operation in India, surveying its progress in the country during the last ten years. It particularly emphasised the urgency of a proper financial organisation of societies and stated that "the responsibilities introduced by the addition to the co-operative organization of the central and provincial banks are of a serious character. To supervise the relations of such institutions with the money market on the one hand, and with their con-

stituent societies on the other, is a task which requires a considerable degree of technical skill, and the administration of the whole co-operative movement in the stages above that of the individual society is a matter which must in the immediate future engage the serious attention of Government and of the people." In October, the Imperial Government appointed a Committee under Sir Edward Maclagan to examine whether the movement especially in its higher stages and in its financial aspect was progressing on sound lines and to suggest any measures of improvement which seemed to be required. The enquiry was to be directed primarily to an examination of such matters as the constitution and working of Central and Provincial Banks, the financial connection between the various parts of the co-operative organization, the audit, inspection, and management of all classes of societies, and the utilization of the reserve funds. The scope of the enquiry was, however, in no way rigidly limited by the Government of India. In its report, which was issued in September 1915, the Committee stated that it had not confined its enquiries to the subjects referred to it, for it had to recognise that the financial welfare of the higher stages of the co-operative system was largely based on the soundness of the foundation.

Government Action on Committee's Report.—The minor recommendations made have already been given effect to, but the opinions of the Local Governments were invited on the important ones. These opinions were published by the Government of India in September 1917. The Government of India has not passed orders on the recommendations in the light of the opinions of the Local Governments. The views of the Local Government differ very widely and clearly showed that a uniform system cannot be introduced in provinces with diverse conditions. The prescribed standard of fluid resources is condemned by some provinces, others object to the use of the Reserve Funds by societies in their own business, and a majority disapprove of the proposed appointment of an expert co-operator with the Government of India, while practically all approve of a summary process of recovery for the dues of members of societies in liquidation. Several provinces have already decided to take action on such of the recommendations as are approved of by the Registrars and are suitable to local conditions, and the co-operative organization in most provinces has been modified more or less on the lines suggested. With a view further to elicit opinion on the recommendations, a special conference of the Registrars was convened in August 1918, to which all the Registrars and a few selected non-official co-operators were invited. The Conference passed several important resolutions, adopting the Committee's suggestions about the utilization of reserve funds and the acceptance of savings deposits by primary societies and disapproving generally of the recommendation about the standard of fluid resource to be maintained by central institutions. The Conference also had under consideration the suggestion made by the Committee on co-operation that as the financing of the move-

ment involved grave difficulties which baffled solution unless the discounting of pro-notes arranged through an Imperial State Bank or the several Presidency Banks, a careful examination of the question was immediately called for. A proposal was made for the appointment of an expert Committee, but the Government of India have practically shelved it by insisting that they would assemble the Committee, at some date convenient to them. Although, as mentioned above, several of the Local Governments have given effect to some of the recommendations of the Committee no orders of general application have yet been issued by the Government of India except with regard to a few of the minor points.

Effect of Crisis on Co-operation.—It is hardly possible to appreciate the effect of the co-operative movement in enabling the agriculturists to resist the rigours of a famine as also to judge the reaction of the latter on the co-operative organisation. For, after the introduction of the co-operative movement in India, the country has not been affected by any widespread famines like those through which the greater portion of the country passed in 1898-1900. The agricultural season of 1918-19, however, put the co-operative organisation in most provinces to a very severe test and the reports for the next few years should afford some indication of the resisting power of the co-operative organization. There has occasionally been scarcity verging on famine in Bombay, Bengal, and the Punjab and the United Provinces but in neither of the two provinces was the distress sufficiently crushing or widespread to render the assistance provided by the societies inadequate for the needs of members. In Bengal and the Punjab, the return of favourable seasons has averted any break down of the system, but the same cannot be asserted of the United Provinces, where there appears to be some danger of the strain not being quite successfully withstood. With a better appreciation of the dependence of the agriculturist on seasons, and a more systematic management of the funds of central societies it is anticipated that in future the situation arising out of a failure of rains will be satisfactorily met. In 1913 and the following months practically the whole of the country was subjected to a banking crisis of considerable magnitude, but a marked feature of this crisis was a tendency to withdraw deposits from non-co-operative institutions and place them in co-operative banks. The outbreak of the War brought another set of influences into play and there was a temporary tendency to withdraw deposits and a temporary cessation of new deposits. The disturbance was not serious except in two or three provinces and by the end of the year 1914-15, the situation became practically normal. In two of the provinces where the situation caused some anxiety owing to the cessation of fresh deposits in Central Banks, the Government sanctioned advances to the extent of Rs. 5,00,000 to Central Societies to be utilized in case of urgent loans to agricultural societies or to meet withdrawals of deposits. On the whole, therefore, the movement appears to have stood the test of the War much better than might have

been expected. While, therefore, the co-operative movement as a whole has been the cause of little or no anxiety to the public as well as to the State, Co-operative institutions in several provinces have borne their share of the burden of the War to the best of their ability. Large subscriptions to the War Loan and relief funds were made in Bengal, Bombay, the Central Provinces, the Punjab and the United Provinces.

Social Reform.—Co-operation has, in some places, stimulated the desire for education and members of rural societies have been known even at advanced ages to receive the elements of education to enable them to put their signatures on the society's papers, and to take a lively interest in the internal work of their societies. There are a few cases where a society has set its face against drunkenness, expelled members notorious for their intemperate habits and has in other ways worked for a better morality by insisting on a high standard of life. Societies have occasionally condemned excessive and even heavy expenditure on marriages, and have thus indirectly trained members to the habit of thrift. Liquidation of old debts again has been rendered possible to a great extent and many an agriculturist who was formerly in a state of chronic indebtedness has been relieved of all his debts and freed from the necessity of incurring new ones. Credit has been much cheapened and it is now possible for the agriculturist to borrow at 9 to 18 per cent. what he could not borrow at less than 20 to 75 per cent. formerly. It has been calculated that in interest alone the agriculturists of India, by taking loans from Co-operative Credit Societies instead of from the village money-lenders, are even now saving themselves from an unnecessary burden of at least 20 lakhs of rupees. The village rates of interest have naturally gone down considerably and the Sowkar is, in most places, not the terror and the force that he was. Business habits have been inculcated with the beneficial result that the agriculturist has learnt to conduct his own work more efficiently. Thrift has been encouraged and the value of savings better appreciated. Participation in the management of societies has brought home to the members the important lessons of self-help and self-reliance; but the most important achievement of co-operation has been the instilling of a sense of communal life—a feeling of "all for each and each for all" amongst the members of a co-operative body. If these signs become as common as they are now rare, and if, over and above the economic benefits achieved by it, co-operation succeeds in its true aim—the building up of the character of the people and the promotion of their welfare by the inculcation of the ideas of thrift and the principles of self-help, and, above all, by showing the wisdom of mutual help and brotherliness amongst neighbours—a resuscitation of rural life such as is conducive to more quickened national progress will not be far off.

The following statements show the progress of the Co-operative movement in different provinces, and contain some information about their detailed working:—

Provinces.			Agricultural Societies.		Non-agricultural Societies.		Central Societies.		REMARKS.
			Credit.	Non-credit.	Credit.	Non-credit.	Banks.	Unions.	
Madras	{ .. { .. { .. {	Number Membership Capital Rs.	2,271 1,35,485 97,93,458	19 569 6,223	283 45,647 31,35,396	51 7,778 5,22,108	(1) 20 3,295 1,00,34,865	(2) (1) 74 (2) 1,737	Includes Provincial Bank. Includes Provincial Union.
Bombay	{ .. { .. {	Number Membership Capital Rs.	1,328 97,268 70,57,385	(6) 62 4,065 1,42,480	153 46,462 42,57,895	62 4,334 5,82,194	(7) 10 4,676 42,49,928	(6) 31 179 (7)	Exclusive of 4 cattle in- surance societies. Includes Provincial Bank.
Bengal	{ .. { .. {	Number Membership Capital Rs.	(3) 3,357 1,20,778 77,60,341	(4) 17 4,812 2,90,376	97 20,495 29,41,059	106 9,194 1,08,062	(5) 53 7,432 82,30,186	(3) (3) 275 (4)	Includes 5 grain banks. Exclusive of 1 cattle in- surance society. Includes Provincial Bank.
Bihar and Orissa	{ .. { .. {	Number Membership Capital Rs.	(8) 1,616 60,778 29,81,629	.... .... ....	41 3,571 2,38,249	23 8,011 96,534	(9) 22 2,555 27,93,125	(8) (8) 22 155 (9)	Includes 3 grain banks, and 1 agricultural association. Includes Provincial Bank. Includes Provincial Feder- ation.
Central Provinces.	{ .. { .. {	Number Membership Capital Rs.	3,377 55,663 57,48,913	35 429 14,388	72 1,698 1,51,880	3 100 2,103	(11) 33 53,073 89,45,449	(12) (11) 207 (11) 4,668 (12)	Includes Provincial Bank. Includes Provincial Feder- ation.
Punjab	{ .. { .. {	Number Membership Capital Rs.	(12a) 3,895 1,24,080 13,743,934	42 960 8,526	18 5,063 3,97,969	27	(12f) 45 4,866 56,16,995	(12a) (12a)	Exclusive of 1 cattle in- surance society. (12b) Includes 1 weavers' union.
United Provinces.	{ .. { .. {	Number Membership Capital Rs.	(13) 2,864 91,616 48,27,414	9 424 34,108	152 3,891 3,17,808	10 1,707 1,63,785	51 6,886 57,86,623	1 13	Exclusive of 4 cattle in- surance societies.

Provinces.	Agricultural Societies.		Non-agricultural Societies.		Central Societies.		REMARKS.
	Credit.	Non-credit.	Credit.	Non-credit.	Banks.	Unions.	
Burma	(14) Number .. Membership .. Capital Rs. ..	65 2,279 50,213 2,657 20,975	85 8,699 11,04,959	2 33 281	(15) 5 3,062 75,59,116	(16) (14) 240 2,529	Exclusive of 379 cattle insurance societies. Includes Provincial Bank but excludes 1 Central Re-insurance Society. Includes 12 district agricultural associations.
Assam	Number .. Membership .. Capital Rs. ..	313 15,950 4,59,774	27 2,278 2,42,567	....	9 893 3,90,104	3 61	............
Coorg	(17) Number .. Membership .. Capital Rs. ..	26 2,867 1,31,474	.... .... ....	....	.... .... ....	....	Includes 3 grain banks but exclusive of 10 cattle insurance societies.
Ajmere Merwara	Number .. Membership .. Capital Rs. ..	362 12,595 14,36,424	.... .... ....	....	4 1,065 12,57,908	....	............
Hyderabad	Number .. Membership .. Capital Rs. ..	558 11,532 14,29,397	51 2,635 1,67,674	....	7 1,026 12,61,089	....	............
Mysore	Number .. Membership .. Capital Rs. ..	907 48,171 24,18,814	108 25,952 22,32,450	44 4,169 2,38,170	19 2,211 15,33,948	....	Includes Provincial Bank.
Baroda (1916-17)	Number .. Membership .. Capital Rs. ..	316 9,390 8,43,479	33 1,613 1,61,245	2 507 4,412	4 1,454 3,35,131	....	............
Cochin	Number .. Membership .. Capital Rs. ..	41 3,141 57,079	13 2,115 89,475	....	1 28....	....	............
Travancore	Number .. Membership .. Capital Rs. ..	32 1,415 58,458	4 641 5,962	8 620 16,256	1 101 65,397	....	............

[illegible]

Currency Commission's Report.

The general features of the Indian Currency system are described in the earlier pages of the Year Book (pp. 196-199), where the general effects of the war are dealt with and mention is made of the appointment of a Currency Committee to examine and report on the best methods to secure a working monetary system and a stable standard rate of exchange. The report of this committee was made known in India on February 2nd, 1920, and is summarised in the following passage :—

We now proceed to summarise the main conclusions at which we have arrived :

(i) It is desirable to restore stability to the rupee and to re-establish the automatic working of the Indian currency system. (Para. 36).

(ii) The reduction of the fineness or weight of the rupee (para. 38), the issue of 2 or 3 rupee coins of lower proportional silver content than the present rupee (para. 39), or the issue of a nickel rupee (para. 40), are expedients that cannot be recommended.

If the legal tender limit of one rupee for the 8 anna nickel coin should prove an obstacle to its free circulation the question of raising the limit of Rs. 5 or Rs. 10 should be considered. (Para. 40).

(iii) The maintenance of the convertibility of the note issue is essential, and proposals that do not adequately protect the Indian paper currency from the risk of becoming inconvertible cannot be entertained. (Para. 41.)

(iv) The rise in exchange, in so far as it has checked and mitigated the rise in Indian prices, has been to the advantage of the country as a whole, and it is desirable to secure the continuance of this benefit. (Para. 50.)

(v) Indian trade is not likely to suffer any permanent injury from the fixing of exchange at a high level.

If, contrary to expectation, a great and rapid fall in the world prices were to take place, and if the costs of production in India fail to adjust themselves with equal rapidity to the lower level of prices, then it might be necessary to consider the problem afresh. (Para. 51.)

(vi) The development of Indian industry would not be seriously hampered by a high rate of exchange. (Para. 52.)

(vii) The gain to India of a high rate of exchange for meeting the Home charges is an incidental advantage that must be taken into consideration. (Para. 53.)

(viii) To postpone fixing a stable rate of exchange would be open to serious criticism and entail prolongation of Government control. (Para. 58.).

(ix) The balance of advantage is decidedly on the side of fixing the exchange value of the rupee in terms of gold rather than in terms of sterling. (Para. 56-7.)

(x) The stable relation to be established between the rupee and gold should be at the rate of Rs. 10 to one sovereign or, in other words, at the rate of one rupee for 11·30016 grains of fine gold, both for foreign exchange and for internal circulation. (Para. 59.)

(xi) If silver rises for more than a brief period above the parity of 2s. (gold) the situation should be met by all other available means rather than by impairing the convertibility of the note issue. Such measures might be (a) reduction of sale of Council bills; (b) abstention from purchase of silver; (c) use of gold to meet demands for metallic currency. If it should be absolutely necessary to purchase silver, the Government should be prepared to purchase even at a price such that rupees would be coined at a loss. (Para. 59.)

(xii) Council Drafts are primarily sold not for the convenience of trade but to provide for the Home charges in the widest sense of the term. There is no obligation to sell drafts to meet all trade demands; but, if without inconvenience or with advantage the Secretary of State is in a position to sell drafts in excess of his immediate needs when a trade demand for them exists, there is no objection to his doing so, subject to due regard being paid to the principles governing the location of the reserves.

Council Drafts should be sold as now by open tender at competitive rates, a minimum rate being fixed from time to time on the basis of the sterling cost of shipping gold to India. At present this rate will vary; but when sterling is again equivalent to gold, it will remain uniform. (Para. 61.)

(xiii) The Government of India should be authorised to announce, without previous reference to the Secretary of State on each occasion, their readiness to sell weekly a stated amount of Reverse Councils (including telegraphic transfers) during periods of exchange weakness at a price based on the cost of shipping gold from India to the United Kingdom. (Para. 62.)

(xiv) The quantity of gold taken by India for all purposes in the period before the war was not disproportionately large having regard to her social customs and economic position; but more productive methods for employing wealth should be encouraged. (Para. 63-4.)

(xv) The import and export of gold to and from India should be free from Government control. (Para. 65.)

(xvi) The import and export of gold to aim at giving the people the form of currency which they demand, whether rupees, notes, or gold; but gold can be employed to the best advantage in the Government reserves where it is available for meeting the demand for foreign remittance.

It would not be to India's advantage actively to encourage the increased use of gold in the internal circulation, but it may for some time be difficult to meet all demands for metallic currency in rupees, and a more extensive use of gold may

be necessary. In order that confidence may not be disturbed by exceptional issues, the issue of gold coin in moderate quantities should be one of the normal methods of meeting demands for currency. (Para. 66.)

(xvii) The Bombay branch of the Royal Mint should be re-opened for the coinage of sovereigns and half sovereigns and facilities should be afforded to the public for the coinage of gold bullion and for the refining of gold. (Para. 67.)

(xviii) The obligation of the Government to give rupees for sovereigns should be withdrawn. (Para. 68.)

(xix) Opportunities should be afforded to the public to exchange sovereigns in their possession at the rate of 15 rupees per sovereign at the time of the introduction of the new ratio. Similar opportunities should be given to holders of the gold mohur which should eventually be demobilised. (Para. 69.)

(xx) The prohibition on the import of silver should be removed as soon as is convenient. (Para. 70.)

(xxi) When the prohibition on the import of silver is removed, the import duty should also be removed, unless the fiscal position demands its retention. (Para. 71.)

(xxii) The prohibition on the export of silver should be retained for the present with a view to the protection of the silver currency from depletion by export.

If the silver mined in India should cease to be purchased by the Government, its export should be permitted under licence. (Para. 72.)

(xxiii) Improved banking facilities and increased opportunities for the investment of savings should be afforded. (Para. 73.)

(xxiv) No recommendation is made for modifying the present practice regulating the purchase of silver for coinage. (Para. 74.)

(xxv) The statutory minimum for the metallic portion of the Paper Currency Reserve should be 40 per cent. of the gross circulation.

Minority Report.—The report was signed by all the members with the exception of Mr. Dadiha Merwanji Dalal, who maintained that there should be no unnecessary disturbance of the monetary standard in India. He therefore made the following recommendations :

(a) The money standard in India should remain unaltered; that is, the standard of the sovereign and gold mohurs with rupees related thereto at the ratio of 15 to 1.

(b) Free and unfettered imports and exports by the public of gold bullion and gold coins.

(c) Free and unfettered imports by the public of silver bullion and silver coins.

(d) The gold mint at Bombay to be continued to receive gold bullion from the public and to coin free of charge gold mohurs of the same exact weight and fineness as the sovereign and to hand them over to the tenderers of gold bullion in less than 15 days.

(e) The Bombay mint to undertake refining of raw gold for the public and not to make any profit on the transaction.

(f) The existing silver rupees of 165 grains of fine silver at present in circulation to continue full legal tender.

(g) As long as the price of silver in New York is over 92 cents, Government should not manufacture silver rupees containing 165 grains fine silver.

(h) As long as the price of silver is over 92 cents Government should coin 2 rupee coins of reduced fineness compared with that of the present silver rupee and the same to be unlimited legal tender.

(i) Government to coin a new 8-anna silver piece of reduced fineness and the same to be unlimited legal tender.

(j) Government not to coin an 8-anna nickel piece.

(k) Government to sell Council bills by competitive tenders for the amount defined in the Budget as required to be remitted to the Secretary of State. The Budget estimate to show under separate headings the amount of Council bills drawn for Home Charges, for Capital Outlay and Discharge of Debt. Council bills to be sold for Government requirements only and not for trade purposes, except for the purpose mentioned in the next succeeding recommendation.

(l) "Reverse" drafts on London to be sold only at 1s. 3 29-32d. The proceeds of "Reverse" drafts to be kept apart from all other Government funds and not to be utilised for any purpose except to meet drafts drawn by the Secretary of State at a rate below 1s. 4 3-32d. per rupee.

(m) Currency notes should be printed in India.

(n) Government not to interfere with the immemorial practice of the Indian public of melting currency coins.

(o) The sterling investments held against the Indian note issue to be liquidated as early as possible and transmitted to India in gold.

(p) The use of one rupee currency notes to be discontinued as early as possible and meanwhile not to be forced into circulation.

Official Action.—Simultaneously with the publication of the Report the following announcement was made by the Secretary of State as to the action which he proposed to take thereon :—

"The Secretary of State for India has considered in consultation with the Government of India the majority and minority reports received from the Committee appointed by him under the Chairmanship of Sir Henry Babington Smith to advise on the subject of Indian exchange and currency. The majority report, which is signed by the Chairman and all members of Committee except Mr. D. M. Dalal, states as its object the restoration of a stable and automatic system and the maintenance of the convertibility of the note issue.

2. The fundamental recommendations of the report are follows:—

(a) that the present rupee, unchanged in weight and fineness, should remain unlimited legal tender;

(b) that the rupee should have a fixed exchanged value and that this exchange value should be expressed in terms of gold at the rate of one rupee for 11.30016 grains of fine gold, that is, one-tenth of the gold contents of the sovereign;

(c) that the sovereign which is now rated by law at rupees 15 should be made legal tender in India at the revised ratio of rupees ten to one sovereign;

(d) that the import and export of gold to and from India should be free from Government control as soon as the change in the statutory ratio has been effected, and that the gold mint at Bombay should be open for the coinage into sovereigns of gold tendered by public;

(e) that the notification of Government undertaking to give rupees for sovereigns should be withdrawn;

(f) that the prohibition on the private import and export of silver should be removed in due course and that the import duty on silver should be repealed unless the fiscal position demands its retention.

3. These recommendations develop with the necessary modifications required by altered circumstances the principles on which the Indian currency system was established before the war, and are accepted by the Secretary of State in Council as expressing the goal towards which Indian administration, following the previous policy, should now be directed.

4. Under the conditions existing prior to the war sterling and gold were identical standards. The existing disparity has made a choice between these standards necessary, and the committee's recommendation is in favour of placing the rupee on a gold basis.

5. In recommending a rate, namely that above mentioned, for the exchange value of the rupee the Chairman and majority have taken account of the high range of silver prices and of the importance of safeguarding the convertibility of the Indian note issue by providing so far as possible that the token character of the rupee shall be restored and maintained, i.e., that the Indian Government may be in a position to buy silver for coinage into rupees without loss. They were also impressed by the serious economic and political risks attendant on a further expansion of Indian prices such as must be anticipated from the adoption of a low rate.

6. The arguments advanced in favour of a gold basis and of a high rate of exchange appear to the Secretary of State in Council to be conclusive, and he has decided to take the necessary steps to give immediate effect to the recommendations on these points. Accordingly, the Government of India have to-day announced that the rate which they will pay for gold tendered to them under the Gold Import Act by private importers will henceforth be fixed at one rupee for 11.30016 grains of fine gold,

i.e., Rs. 10 for the gold contents of the sovereign. The consequential changes in the regulations relating to the sale of Council drafts by the Secretary of State in Council and of reverse drafts by the Government of India will be notified separately.

7. The question of the internal ratio presents special difficulties. The Committee recommend the maintenance of gold on a legal tender footing especially in view of possible difficulties in obtaining adequate supplies of silver. A fixed ratio must, therefore, be established between the rupee and gold, as used in the internal circulation, either one sovereign for Rs. 15 as at present or one sovereign for Rs. 10 in correspondence with new exchange ratio. The former alternative would give the sovereign the status of an over-valued token coin, necessitating permanent control over the import of sovereigns and making an open gold mint impossible. The Secretary of State in Council agrees with the Committee that such conditions ought not to be contemplated as a permanent arrangement. On the other hand, the lower ratio cannot be effectively introduced while a great disparity continues to exist between the commercial price of gold in India and the intended Indian mint par of one sovereign for Rs. 10.

8. Present conditions are a product of the war and in some sense artificial. They cannot be immediately remedied without the risk of shock to the economic and monetary system in India, and of reaction elsewhere to which India cannot in her own interests be indifferent: a gradual process of rectification and of adjustment to new conditions is required. For some time past action has been taken in India to reduce the premium on gold by regular Government sales of bullion to the public, and this measure will be further developed. It may be expected that in that way a natural adjustment may be effected until the path to legislation is cleared.

9. The Secretary of State has decided, therefore, first, that the import of gold shall continue for the present to be controlled by license under the Gold Import Act, with a fixed acquisition rate as mentioned above; second, that meanwhile, periodical sales of gold bullion to the public shall continue; and third, that as a provisional measure during the transition period sovereigns shall remain legal tender at the present ratio of Rs. 15.

10. In arriving at these decisions the Secretary of State in Council has not failed to give careful consideration to the minority report signed by Mr. D. M. Dalal. Mr. Dalal's main object is the effective restoration and maintenance of the ratio of 15 rupees to a sovereign as a measure both of exchange and of the circulating value of the rupee. In order to secure this he relies upon freedom for the melting and export of rupees and correspondingly to freedom for the import of gold. To meet the possible result in shortage of silver coins he recommends that as long as the New York price of silver remains above 92 cents Government should coin two rupee silver coins of reduced fineness, the coinage of rupees of the present weight and fineness being meanwhile suspended, and only resumed when the price

of silver falls to the figure named. He also recommends that sterling drafts on the Secretary of State should be sold only at 1s. 3 29-32d.

11. The Secretary of State in Council is satisfied that this programme could not be adopted without untoward consequences. The heavy exports of silver coin to be anticipated under the scheme must threaten not only the whole silver circulation but also the Government reserves of silver coin, and entail the gravest risk of inconvertibility of the Government note issue. The demand for the gold required continually to make this deficiency good must greatly aggravate any strain there may be on the gold stock of world when the freedom of import is restored. Nor is it safe to assume that these difficulties could be met by issuing new silver coins of inferior fineness; the evidence against the acceptability of an inferior substitute for the present rupee has impressed the majority, and their recommendation on this head is accepted by the Secretary of State as decisive. Mr. Dalal's recommendation in regard to the rate for sterling drafts, if adopted,

must produce an immediate crash in exchange bringing unmerited disaster to those who have reasonably relied on some continuity of policy. The only cover which his scheme affords is the export of the country's circulating currency. In any case, even if a return to the pre-war level of exchange could be accomplished without a shock to trade or risk to the Currency system, it would lay India open to a further serious inflation of prices, while the majority's recommendation would tend towards a reduction of general price levels in India.

12. Both during and since the war Indian currency and exchange have presented problems previously unanticipated and more perplexing than any encountered since the decision to close the mints in 1893. But the Secretary of State in Council is satisfied that decisions reached promise an eventual solution, and he desires to express his acknowledgments to the Committee and their Chairman for the ability and thoroughness with which they have explored the issues and have framed their recommendations."

OILS AND OIL CAKES.

In 1917-18 exports of oil-seeds amounted to 457,700 tons, a decrease of 51 per cent. as compared with the previous year and of 68 per cent. with the pre-war average. The value of these exports amounted to Rs. 8,22 lakhs of which Rs. 18 lakhs represents an advance on the previous year's prices.

A pamphlet on the subject recently published by the Commercial Intelligence Department points out that it is both economically and industrially unsound for India to export her oil seeds instead of manufacturing the oils and oil cakes in India. It allows other countries to reap the manufacturers' profits and at the same time deprives Indian agriculture of the great potential wealth, as cattle-food and manure, contained in the oil cakes. An immense quantity of oil is, as a matter of fact, already manufactured in this country by more or less crude processes. Village oil mills worked by bullocks and presses worked by hand exist in all parts of the country and supply most of the local demand for oil. There has also been a great increase in recent years in the number of oil mills worked by steam or other mechanical power. These crush all the commoner oil seeds and development has been especially marked in the case of mustard oil, castor oil and groundnut oil. In spite of all this there has been a perceptible diminution in the export of oil from India, particularly of cocoanut oil and linseed oil, and an increase in the export of oil seeds, which is particularly marked in the case of copra and groundnuts. The situation created by the War has naturally led too much discussion of the possibility of developing on a large scale the existing oil-milling industry in India.

There are three difficulties with which any proposal to develop in India an oil-milling

industry on a great scale is faced. In the first place, there exist high protective tariffs in European countries which encourage the export from India of the raw material rather than the manufactured product. Secondly, there is a better market for the oil cake in Europe than in India and the freight on oil seeds is less than the freight on cake. Thirdly, it is much easier and less expensive to transport oil seeds by sea than it is to transport oil. While this has been the position in the European markets, Indian made oils, other than cocoanut oil, have made enough headway in Eastern markets to suggest the possibility of a development of those markets.

The problem of finding a market for oil cakes is equally important. The value of oil cakes is much better appreciated in Europe than in India. The Indian cultivator is prejudiced against the use of machine-made cake as a cattle food or as manure because he considers that it contains less oil and therefore less nourishment than the village-made cake. He is therefore unwilling to buy it except at a reduced price. His prejudices on this point have no justification in fact since experts are agreed that mill cake is a better food for cattle than village-made cake. Even when the mill cake contains less oil than the village cake, there is still more oil in the cake than cattle can digest. The excess of oil in the village cake, where it exists, is a drawback and not an advantage to the use of the cake as food. A considerable amount of demonstration work has been done by the Agricultural Departments of Government in order to remove the cultivator's prejudices and there is said now to be an increasing demand for most classes of mill cake.

The Women's Medical Service for India.

This Service is included in the National Association for supplying female medical aid to the Women of India, generally known as the Countess of Dufferin's Fund and is administered by the Central Committee of that Fund. The Government of India has so far allotted the sum of £10,000 per annum towards its maintenance. The present sanctioned cadre is twenty-five first class medical women, but it is hoped that this number will shortly be augmented. Recruitment of the service is made (a) in India by a medical sub-committee of the Central Committee which includes the Director-General, Indian Medical Service, the Honorary Secretary to the Central Committee, and a first-class medical woman; (b) in England, by a sub-committee, consisting of a medical man and two medical women conversant with conditions in India, to be nominated by the Home Committee of the Countess of Dufferin's Fund. These sub-committees perform the duties of a medical board examining candidates or physical fitness, and for return to duty after invaliding.

The Central Committee determines what proportions of the members of the Service is to be recruited in England and in India respectively. In the original constitution of the Service, duly qualified medical women who are in the service of, or who have rendered approved service to, the Countess of Dufferin's Fund, are to have the first claim to appointment, and thereafter special consideration is to be paid to the claims of candidates who have qualified in local institutions and of those who are natives of India.

Qualifications.—The qualifications are that the candidate must be (a) a British Subject resident in the United Kingdom or in a British Colony or in British India, or a person resident in any territory of any Native Prince or Chief under the suzerainty of His Majesty exercised through the Governor-General of India or through any Governor or other officer subordinate to the Governor-General of India. (b) Must be between the ages of twenty-four and thirty at entry. (c) She must be a first-class Medical Woman, i.e., she must possess a medical qualification registerable in the United Kingdom under the Medical Act, or an Indian or Colonial qualification registerable in the United Kingdom under that Act: but this condition does not apply at the original constitution of the Service to medical women in charge of hospitals who, in the opinion of the Central Committee, are of proved experience and ability. (d) The candidate must produce a certificate of health and character. But the Central Committee reserves the power to promote to the service ladies not possessing the above qualifications, but who have shown marked capacity. Members of the Service are required to engage for duty anywhere in India or Burma. Those recruited in England serve for six months, and those recruited in India for three months, in a General Hospital of the Province to which they are deputed. After this period of probation has been satisfactorily passed their appointments are confirmed. The services of Members

may be lent to Local or Municipal bodies, or to special institutions, which may be responsible for whole or part of the pay.

Pay.—The rates of pay are as follows:—During probation Rs. 350 per month: thereafter Rs. 400 up to the end of the 4th year: Rs. 450 from the 5th to the 7th year; Rs. 500 from the 8th to the 10th year; and Rs. 550 after the 10th year. But no member can be confirmed in the 400 rupee grade unless she has passed an examination in such vernacular as the Provincial Committee shall prescribe, within one year of her appointment. In addition suitable quarters are provided free of rent: or a house rent allowance to be determined by the Provincial Committee may be granted in lieu of it.

Members of the Service are permitted to engage in private practice provided it does not interfere with their official duties, and the Provincial Committee has the power to determine whether such duties are thus interfered with. Except in very special cases retirement is compulsory at the age of forty-eight. A member whose appointment is not confirmed, or who is dismissed, is granted an allowance sufficient to pay her passage to England.

Leave Rules.—(a) Casual Leave, which is occasional leave on full pay for a few days, and is not supposed to interrupt duty. (b) Privilege Leave, which is leave on full pay and is meant to provide a month's holiday in the year. If it cannot be granted during the year, it can be accumulated up to a limit of three months. (c) Furlough, at the rate of two months for each year of duty, the latter including privilege leave and casual leave. First furlough is not granted till after four years of duty, and more than eight months furlough is not granted at one time. Study leave may also be granted not exceeding three months at a time and up to twelve months during the whole service. (d) Sick leave, up to a maximum of two years. (e) Extraordinary leave at any time at the discretion of the Central Committee. When on furlough or sick leave the allowances are half the average monthly pay of the six months presence on duty immediately preceding the taking of the leave. There are no allowances during extraordinary leave. A Lady appointed in England receives a sum of £70 to cover her passage and incidental expenses. There are also allowances to cover the cost of journeys by rail and road.

There is also to be a Provident Fund, each member contributing monthly thereto five per cent. of her salary, the Association contributing an equal amount, and each subscriber's account being granted interest on the amount standing to credit at the rate of 4 per cent. per annum, "or at such rate as the Central Committee can invest without risk to the funds of the Association."

The Member loses her contributions if she resigns (except on account of ill-health) before completing five years' service, or in the event of dismissal. On retirement after approved service the sum which has accumulated to the credit of the subscriber is handed over to her.

The Lady Hardinge Medical College was opened by His Excellency Lord Hardinge on February 17th, 1916. This College was established in commemoration of the visit of their Imperial Majesties to Delhi in 1911, with the object of providing a complete medical education for women of India. The initial cost was defrayed by subscriptions collected by the late Lady Hardinge mainly from Indian Princes and Chiefs. After her death in 1914, it was decided to complete the institution as a memorial to Lady Hardinge.

The College and Hospital buildings together with hostels for medical students and nurses, and residences for the medical and teaching staff, are grouped in a large compound, situated in the Imperial enclave in close proximity to the city of Delhi. The College buildings consist of three blocks containing Library, Museum, Lecture Rooms, Offices and Laboratories. Separate hostels with kitchens and dining rooms are provided for Hindu, Muhammadan, Sikh, Parsee, Indian Christian and European students. The total cost of the completed buildings and equipment will be about 25 lacs. The College is supported by a grant from Government. It is designed to accommodate 100 students and to provide a full medical curriculum as required by the General Medical Council of Great Britain. At present it is affiliated in the Faculty of Medicine of the Uni-

versity of the Punjab up to the First Professional Examination. The staff are all women.

Principal and Professor of Medicine, Miss K. A. Platt, M.D. (LOND.), Women's Medical Service, India; Professor of Surgery, Miss H. M. Franklin, M.B.B.S. (LOND.); Vice Principal and Professor of Gynaecology and Midwifery, Miss C. L. Houlton, M.D., B.S., (LOND.) Cert. Trop. Medicine (LOND.), Women's Medical Service, India; Professor of Pathology, Miss M. B. Stogdon, L.R.C.P., M.R.C.S.; Professor of Anatomy, Miss M. C. Murphy, M.B. (CAL.), L.R.C.P. (LOND.) M.R.C.S., (ENG.), Women's Medical Service India; Professor of Physiology, Miss M. R. N. Holmer, M.A. (DUBLIN) Nat. Sc. Tripos Class 1 (Cantab.) Diploma (Distinction, Oxon.); Professor of Chemistry, Miss A. M. BAIN, M.A. B. SC., (Aberdeen), Special Distinction in Chemistry; Professor of Botany and Zoology, Miss Hett; Professor of Mathematics and Physics, Miss P. M. Borthwick, B. SC., (LOND.) M. SC. (Bristol); Warden and Secretary, Miss M. W. Jesson, Maths. Tripos (Cantab.).

The Lady Hardinge Training School for Nurses.—Attached to the Hospital which is designed to hold 168 beds is a training school for nurses and midwives. It is intended to train Indian girls as nurses, who will be available for nursing in private families as well as in hospitals. Nursing Superintendent, Miss L. E. Mackenzie.

THE COUNTESS OF DUFFERIN'S FUND.

The National Association for supplying female medical aid to the women of India at once one of the most efficient as it is among the most useful and benevolent institutions in India, is the outcome of the work of the Countess of Dufferin and Ava during the time of her husband's Viceroyalty. The late Queen Victoria drew the attention of the Countess, on the departure of the latter for India, to the question of supplying medical aid to women in this country, and asked her to take a practical interest in the subject. As the result of her enquiries she found that, though certain great efforts were being made in a few places to provide female attendance in hospitals, training schools, and dispensaries for women, and although missionary effort had done much, and had indeed for many years been sending out pioneers into the field, yet taking India as a whole, its women, owing to the "purdah" system, were undoubtedly without that medical aid which European women were accustomed to consider as absolutely necessary. In the Countess' own words written in 1886 after the movement had been started: "I found that even in cases where nature, if left to herself, would be the best doctor, the ignorant practice of the so-called midwife led to infinite mischief, which might often be characterised as abominably cruel. It seemed to me, then, that if only the people of India could be made to realise that their women have to bear more than their necessary share of human suffering, and that it rests with the men of this country and with the women of other nationalities to relieve them of that unnecessary burden, then surely the men would put their shoulders to the wheel and would determine that wives,

mothers and sisters, and daughters dependent upon them should, in times of sickness and pain, have every relief that human skill and tender nursing could afford them.....I thought that if an association could be formed which should set before itself this one single object, to bring medical knowledge and medical relief to the women of India, and which should carefully avoid compromising the simplicity of its aim by keeping clear of all controversial subjects and by working in a strictly unsectarian spirit, then it might become national, and ought to command the support and sympathy of every one in the country who has women dependent upon him."

Initiation of the Scheme.—Lady Dufferin's plans were warmly received by the public all over India. The scheme was drawn out and published in the different dialects. The association was named "The National Association for Supplying Female Medical Aid to the Women of India," and the money for its support, as it was received, was credited to the "Countess of Dufferin's Fund." The affairs of the Association were managed by a central committee of which the Countess of Dufferin during her stay in India was President. Branch Associations, each independent for financial and administrative purposes, but linked with the central committee, were formed in most parts of the country, and the work may be said to have started from August 1885. The objects of the Association are thus set-forth in its publications.—I. Medical tuition, including the teaching and training in India of women as doctors, hospital assistants, nurses, and midwives. II. Medical relief, including the estab-

lishing under female superintendence, of dispensaries and hospitals for the treatment of women and children; the opening of female wards under women superintendents in the existing hospitals and dispensaries; the provision of female medical officers and attendants for existing female wards; and the founding of hospitals for women where special funds or endowments are forthcoming.

III. The supply of trained female nurses and midwives for women, and nurses for children in hospitals and private houses.

Within four years from its inception there were in existence twelve hospitals for women and fifteen dispensaries, most of which were officered by women, and all more or less closely connected with the Association. From the subscriptions collected there was enough to set aside a substantial sum as an endowment fund; and also six medical, twelve nursing and two hospital assistant scholarships had been provided for.

Growth of Scheme.—The first regular training school in India for the instruction of native pupils in medical and surgical nursing, and in midwifery was established in 1886 by the Bombay Branch of the Association in connection with the Cama Hospital in Bombay. This is a civil institution under Government management, and is solely for women and children of all castes and denominations. In

connection therewith is the Allbless Obstetrical Hospital and the Jaffer Suleiman Dispensary for women and children. The present physician-in-charge is Miss A. Turner Watts, M.D. (Lond).

There are thirteen Provincial Branches working under the central committee; and attached in some manner, or affiliated to the provincial branches, there are about one hundred and forty Local and District Associations or Committees engaged in furthering the work of the Association. There are one hundred and fifty-eight hospitals, wards, or dispensaries of various kinds for the medical relief of close on one and a quarter million women and children; and the value of the institutions engaged in the work of the Association was estimated at over 56 lakhs of rupees.

Annual Report.—The Report of the Association is published annually, and can be obtained either from the Superintendent of Government Printing, Calcutta, or from the leading booksellers, the price being one rupee. The map of India published therewith shows the women's Hospitals officered by women in India. The Honorary Secretary is Lieut.-Col. Austen Smith, C.I.E., I.M.S., and the Joint Secretary, Dr. M. I. Balfour, M.B., Women's Medical Service. The Headquarters of the Central Committee are Viceregal Lodge, Delhi and Simla.

NURSING.

Whilst India cannot show the complete chain of efficiently-nursed hospitals which exists in England, there has been a great development of skilled nursing of recent years. This activity is principally centred in the Bengal, Madras, and Bombay Presidencies, where the chief hospitals in the Presidency towns are well nursed, and where large private staffs are maintained, available to the general public on payment of a prescribed scale of fees. These hospitals also act as training institutions, and turn out a yearly supply of fully trained nurses, both to meet their own demands and those of outside institutions and private agencies. In this way the supply of trained nurses, English, Anglo-Indian and Indian, is being steadily increased. In Bombay the organisation has gone a step farther, through the establishment of the Bombay Presidency Nursing Association, c/o St. George's Hospital, Bombay. This is composed of representatives of the various Nursing Associations in charge of individual hospitals, and works under the Government. The principle on which the relations of this Association with the Local Associations is governed is that there shall be central examination and control combined with complete individual autonomy in administration.

Nursing Bodies.—The Honorary Secretary of the Calcutta Nursing Association is Mr. R. A. B. Reynolds, the Presidency General Hospital. The address of the Mayo Hospital Nursing Association is in Strand Road. In Madras there is the General Hospital, with a staff of 62 nurses, the Government Maternity Hospital, the Caste and Gosha Hospital at Killpauk, the Royappeta Hospital and the Ophthalmic Hospital.

Bombay Presidency.—The Bombay Presidency was amongst the first in India to realise the value of nursing in connection with hospital work. The first steps were taken on the initiative of Mr. L. R. W. Forrest at St. George's Hospital, Bombay, where a regular nursing cadre for the hospital was established together with a small staff of nurses for private cases. This was followed by a similar movement at the J. J. and Allied Hospitals and afterwards spread to other hospitals in the Presidency. Ultimately, the Government laid down a definite principle with regard to the financial aid which they would give to such institutions, agreeing to contribute a sum equal to that raised from private sources. Afterwards, as the work grew, it was decided by Government that each nursing association attached to a hospital should have a definite constitution, and consequently these bodies have all been registered as Associations under Act 21 of 1860. By degrees substantial endowments have been built up, although the Associations are still largely dependent upon annual subscriptions towards the maintenance of their work. The chief of these Associations are:—

St. George's Hospital Nursing Association.
Secretary: D. W. Wilson, St. George's Hospital, Bombay.

J. J. Hospital Nursing Association.
Secretary: A. G. Gray, Jamsetji Jijibhai Hospital, Bombay.

Gokaldas Tejpal Hospital Nursing Association.
Secretary: Rahimtullah Currimbhoy.

Cama Hospital Nursing Association. Hon.
Secretary: H. Macnaghten, Esq.
Address—Cama Hospital, Bombay.

Sassoon Hospital Nursing Association.
Address—Sassoon Hospital, Poona.

Ahmedabad and Lely Memorial Association.
Address—Civil Surgeon, Ahmedabad.

After further experience it was felt that it is undesirable to have a considerable number of detached and independent nursing associations, training and certifying nurses, without any common standard of entrance examination, or certification. It was therefore decided to establish the Bombay Presidency Nursing Association which came into existence in the year 1910. This is an Association formed partly of representatives of all affiliated associations and partly of direct representatives of Government, the Surgeon-General with the Government of Bombay always being the chairman. It is financed partly from the product of endowments and partly from contributions from the Government of India. If subsequently further funds are needed they are to be provided by contributions from the affiliated Associations.

The principle on which the Bombay Presidency Nursing Association works is a central system of examination, certification, registration and control. It is now the only nursing, examining, registering and certifying body in the Bombay Presidency. At the same time, the local associations retain entire charge of their local funds excepting Provident funds which have been transferred to the Central fund, and also entire control of the nurses when they are in their employment. In a sentence, the principle is central examination and certification and local control. By degrees it is hoped to be able to establish the principle that none but nurses registered under or certified by this association shall be employed in any Government institution.

The Association commenced its operations on the 1st April 1911. The institutions recognized under the by-laws for the training of nurses at present are—St. George's Hospital, J. J. Hospital, Cama and Allbless Hospitals in Bombay, the Civil Hospital, Karachi, the H. and P. Civil Hospital, Ahmedabad, and the Sassoon Hospital in Poona, and the following for the training of midwives;—The Cama and Allbless Hospitals, St. George's Hospital and the Bai Motilbai Hospital in Bombay, and the Sassoon Hospital in Poona.

Provision for retiring allowances is made for all members on the basis of a Provident Fund and a Nursing Reserve has been established for employment in emergencies such as war, pestilence or public danger or calamity.

Address—The Secretary, Bombay Presidency Nursing Association, St. George's Hospital, Bombay.

Lady Minto Nursing Service.—In 1905, there was one organisation existing in the Punjab and the United Provinces called the Up-Country Nursing Association for Europeans in India, which was established in 1892. This Association carried out very useful work in certain parts of India, but was hampered by want of funds. For this reason it was found impossible to extend their organization and the

urgent need for a larger number of trained nurses at charges within the reach of all classes was much required. The late Lady Curzon worked energetically to provide an enlarged nursing organization, but principally for financial reasons, was unable before leaving India to bring her scheme to fruition. The Home Committee of the existing Association recognizing the need of expansion approached Lady Minto before she left England in 1905 and begged her assistance and co-operation. After much consideration and discussion with the Government of India, Lieutenant-Governors and Commissioners of Provinces, the present Association was established. In 1906 an appeal was made by Lady Minto to the public both in England and India to start an endowment fund. This appeal was most generously responded to. Each year the endowment fund has gradually increased, and with the assistance of a Government grant, homes for nurses have been established in seven Provinces of India and Burma, of which the original Association formed the nucleus. To avoid confusion with other Associations, the enlarged organisation, by request of the Home Committee, was named "Lady Minto's Indian Nursing Association" carrying on the same work as before, namely, that of selecting suitably trained nurses in England, and making the necessary arrangements for their transfer to India. Hon. Secretary, Lieut.-Col. Sir J.R. Roberts, C.I.E., I.M.S., Simla; Hon. Secretary, Home Branch, Lieut.-Col. Sir Warren Crooke-Lawless, Kilcrone, Cloyne, Co. Cork.

Nurses' Organizations.—The Trained Nurses' Association of India and the Association of Nursing Superintendents of India are not Associations to employ or to supply nurses, but are organizations with a membership wholly of nurses with the avowed objects of improving and unifying nursing education, promoting *esprit de corps* among nurses, and upholding the dignity and honour of the nursing profession. The Associations have a membership of 202, including nurses trained in ten or more different countries, Europeans, Americans, New Zealanders, Australians and Indians. The Association of Superintendents was started in 1905 as the Association of Nursing Superintendents of the United Provinces and the Punjab, but by the next year its membership had spread over the country to such an extent that the name was changed to include the whole of India. The Trained Nurses' Association was started in 1908, and a monthly Journal of Nursing began to be published by the two Associations in February, 1910. The Associations have since become affiliated with the International Council of Nurses.

Below are given names of Officers of the Associations:—

Trained Nurses' Association of India.

President. Miss Bartleet, Peach Cottage, Coonoor. **Hon. Secretary and Treasurer,** Miss Wilkinson, S. Stephen's Hospital, Delhi.

Association of Nursing Superintendents.

President, Miss Mill, St. George's Hospital, Bombay. **Hon. Secretary and Treasurer,** Mrs. Blackaby, South Ville, Colaba.

Indians Abroad.

The Indian is naturally averse from emigration beyond the seas. Nevertheless there are some hundreds of thousands of Indians resident in other lands as labourers, shopkeepers or professional men. Their total number relatively to the population of the Indian Empire is very small being something under two million. In itself, however, it is considerable; and it acquires an extrinsic importance from the social and political issues involved in the settlement of Indians, either as indentured labourers in Crown Colonies, or as free residents in self-governing countries.

The right to migrate.—From the Imperial standpoint the case of Indian migration to the self-governing Dominions is much the more important, and for a time the problems arising therefrom became acute. There were two centres of difficulty—South Africa and British Columbia; and in South Africa the old trouble has recrudesced in a form that threatens once again to become acute. In each country the situation involved particular local problems of extreme difficulty. But before passing to a discussion of them it is necessary to refer to the larger question of the right of migration within the Empire. The intense feeling aroused in India by the disabilities suffered by Indians in the two countries named was primarily due to the belief that Indians were being denied the common rights of British citizenship. Without attempting to define the term "British citizenship," which is not so easily susceptible of definition as may be imagined, it must suffice to observe that unrestricted migration within the Empire does not appear to be the common right of His Majesty's subjects. The laws of the Dominion of Canada and the Commonwealth of Australia confer powers of exclusion of would-be immigrants hailing from any part of the Empire. These laws have been enforced against Englishmen on various grounds. The ground of exclusion is usually economic, and it is on that ground that the Dominion objection to unrestricted immigration from India operates. It is unfortunately inevitable that the problem assumes in the popular mind a racial complexion. But in actual experience it is the clash of economic interests and the possible political difficulties involved in the settlement of Indians in large numbers in the self-governing Dominions which the statesmen of the Empire have to take into account.

The first attempt to deal with the right of migration from a universal and Imperial standpoint was made by Lord Hardinge. In his address to the Imperial Legislative Council on September 8, 1914, he suggested that an endeavour should be made to lay down a principle of **reciprocal treatment** acceptable to all the Dominions, whereby emigration might be restricted in India itself by a system of passports, while the Dominions might give facilities to a moderate number of immigrants under certain conditions. This suggestion met with general approval in and out of India, and eventually bore fruit at the deliberations of the Imperial Conference and War Cabinet in 1917 and 1918. In the former year a Memorandum was pre-

sented on behalf of the India Office setting forth in detail Lord Hardinge's system of reciprocity, and in the latter year the following resolution was agreed to unanimously by India and all the self-governing Dominions:—

"(1) It is an inherent function of the Governments of the several communities of the British Commonwealth, including India, that each should enjoy complete control of the composition of its own population by means of restriction on immigration from any of the other communities.

"(2) British citizens domiciled in any British country, including India, should be admitted into any other British country for visits, for the purpose of pleasure or commerce, including temporary residence for the purpose of education. The conditions of such visits should be regulated on the principle of reciprocity as follows:—(a) The right of the Government of India is recognised to enact laws which shall have the effect of subjecting British citizens domiciled in any other British country to the same conditions in visiting India as those imposed on Indians desiring to visit such country; (b) such right of visit or temporary residence shall in each individual case be embodied in a passport or written permit issued by the country of domicile and subject to *visé* there by an officer appointed by and acting on behalf of the country to be visited if such country so desires; (c) such right shall not extend to a visit or temporary residence for labour purposes or to permanent settlement.

"(3) Indians already permanently domiciled in the other British countries should be allowed to bring in their wives and minor children on condition: (a) That not more than one wife and her children shall be admitted for each such Indian; and (b) that each individual so admitted shall be certified by the Government of India as being the lawful wife or child of such Indian."

In regard to the above resolution the present position in the principal self-governing Dominions is as follows:—

SOUTH AFRICA.—No legislation is necessary to carry the resolution into effect, as it is merely a re-statement of the policy embodied in the Immigrants' Regulation (Restriction) Act of 1913 and the Indians Relief Act, No. 22 of 1914.

NEW ZEALAND.—No legislation necessary.

CANADA.—The Committee of the Privy Council of Canada has recommended that "certain modifications of the restrictive provisions of the Immigration Act and regulations should be made for the relief of such of our fellow-British subjects of the East Indian race as may be effected by the resolution."

AUSTRALIA.—The Commonwealth Government has made the following decisions:—(a) The Government agrees to the admission on passports of Indian merchants, students, and tourists with their respective wives the exemption to continue without necessity for annual

application as long as the status is preserved. (b) Indians domiciled in Australia may bring one wife and minor children. (c) Australians visiting India will require to obtain passports. (d) Legislative proposals will be submitted to Parliament to place Indians on an equality with other British subjects as regards old age and invalid pensions but admission to the Parliamentary franchise is not approved at present."

In South Africa the trouble gathered round the disabilities of Indians already settled there. The question of immigration restrictions, though important, held a less prominent place in the agitation. The most acute point of the controversy was the annual £3 head tax in Natal. Restrictions on the migration of Indians from one State of the Union to another was another sore point. The requirement to take out trading licenses was also felt to be a vexatious and invidious distinction between Indian and European traders, and it was round this point that the controversy in the Transvaal was centred. While the controversy was at its height, an Act was passed in the Union Parliament, restricting entry into South Africa to the wife or child of a lawful immigrant or resident who was the wife or child of a monogamous marriage. In a case brought before the courts it was decided that the only wife of a marriage solemnised according to the rites of a religion permitting polygamous marriages could not be admitted. The leaders of the agitation in South Africa adopted passive resistance tactics, which brought large bodies of Indian workmen in Natal into conflict with the police. The situation became acute, and a strong demand arose in India for the appointment of a Government Commission to enquire into the whole question. The Union Government appointed a Commission, and invited the Government of India to send a representative. Sir Benjamin Robertson, Chief Commissioner of the Central Provinces, was selected. The Commission reported on the whole favourably to the Indians.

The Indians' Relief Act, 1914, gives effect to those five of the 14 recommendations made by the Commission which necessitated legislation. First by the deletion of certain words from the Immigrants' Regulation Act, 1913, an Indian, married in accordance with the rites of a religion by the tenets whereof polygamy is recognised, is enabled to introduce into the Union one wife as well as her minor children by him, provided the Indian has in the Union no other wife. Another recommendation of the commission to which effect is given is as follows: An Indian man and an Indian woman may, on a joint application to a magistrate or marriage officer, and on complying with certain prescribed formalities, obtain registration of such a union between them as is *de facto* a monogamous union, and such registration will constitute a valid and binding marriage between them with all the incidents thereof, and will be recognised in the Union as such, notwithstanding that, by the tenets of the religion which they profess, polygamous marriages are recognised.

The third recommendation of the Commission to which effect is given is a provision for the appointment of Indian priests as marriage officers under the marriage laws of the several provinces

of the Union. So far as Cape Colony is concerned this had been possible, as regards the Mohammedan religion, under Act No. 1 of 1860, while Law No. 19 of 1891 of Natal contained a similar provision. Under the new Act any Indian priest may be appointed a marriage officer for the purpose of the marriage laws of any province of the Union, and a marriage solemnised by him will, if solemnised in accordance with the rites and formularies of his religion and without any prescribed statutory words signifying the binding nature of the ceremony, be recognised as valid.

Another provision provides for the repeal of that section of the Natal Indian Immigration Laws which imposed an annual licence of £3 on Indians who, introduced as indentured labourers, failed to reintendure at the termination of their contracts.

The Smuts-Gandhi Agreement.—With the measure of relief afforded by the Act of 1914 Mr. M. K. Gandhi, who had gone to South Africa in connection with the passive resistance movement, expressed himself as satisfied; and certain correspondence passed between him and General Smuts, who was then the Minister of the Interior, in which an agreement was arrived at with regard to Indian traders in the Transvaal. The following extracts from the correspondence summarise the agreement and are of importance because of the part they played in 1919 when the controversy was revived:—

(a) From a letter of the Secretary for the Interior to Mr. Gandhi, dated June 30, 1914: "With regard to the administration of existing laws, the Minister desires me to say that it always has been, and will continue to be, the desire of the Government to see that they are administered in a just manner with due regard to vested rights."

(b) From the same letter: "In conclusion General Smuts desires me to say that it is, of course, understood and he wishes no doubts on the subject to remain, that the placing of the Indians' Relief Bill on the Statute Book of the Union, coupled with the fulfilment of the assurance he is giving in this letter in regard to the other matters referred to herein touched upon at the recent interviews, will constitute a complete and final settlement of the controversy which has unfortunately existed for so long, and will be unreservedly accepted as such by the Indian community."

(c) From a letter of Mr. Gandhi to the Secretary for the Interior, dated July 7, 1914: "By vested rights I understand the right of an Indian and his successors to live and trade in the township in which he was living and trading, no matter how often he shifts his residence or to place business from place in the same township."

(d) From a letter of Mr. Gandhi to the Secretary of the Interior, dated June 30, 1914: "The passing of the Indians' Relief Bill and this correspondence finally closes the passive resistance struggle. As the Minister is aware, some of my countrymen have wished me to go further. They are dissatisfied that the trade licenses laws of the different Provinces, the Transvaal Gold Law, the Transvaal Townships Act, the Transvaal Law 3 of 1885, have not been altered so as

to give them full rights of residence, trade and ownership of land. Some of them are dissatisfied that full interprovincial migration is not permitted, and some are dissatisfied that on the marriage question the Relief Bill goes no further than it does. They have asked me that all the above matters might be included in the passive resistance struggle. I have been unable to comply with their wishes. Whilst therefore they have not been included in the programme of passive resistance, it will not be denied that some day or other these matters will require further and sympathetic consideration by the Government. Complete satisfaction cannot be expected until full civic rights have been conceded to the resident Indian population."

In 1919.—The controversy again broke out, and this time it was confined to the Transvaal. The points at issue were as follows:—

(1) The interpretation of Mr. Gandhi's definition of "vested rights" was disputed. On the one hand it was held that "vested rights" meant "the rights existing at the time of the agreement", and it was accordingly alleged that the Indians who opened shops and carried on businesses in townships in which they were not licensed to trade in 1914 had broken the terms of Smuts-Gandhi agreement. It was further contended that the word "successor" in the definition meant "legal successor or heir," and that those Indians who had sold their businesses to other Indians had in that respect also infringed the agreement. On behalf of the Indians, on the other hand, it was argued that "vested rights" meant the inherent rights of the whole Asiatic community—the right to trade—whether the rights were being exercised by any particular man at the time of the agreement or not, and included even the inherent rights of the unborn. As regards "successor", that, the Indian community maintained, meant "any successor in title, no matter how he acquired his right to succession, whether he purchases it or otherwise."

(2) The Transvaal Gold Law of 1908 (No. 35) as interpreted in the judgment of Krugersdorp Municipality *versus* Beckett provides in Section 130 that no right under that law may be acquired by a coloured person, and that no holder of a right may permit any coloured person other than his *bona fide* servant to reside on or occupy ground held under such right. Under Section 131 no coloured person is permitted to reside on proclaimed land in the Mining Districts of Johannesburg, Boksburg, and Krugersdorp except in locations, etc., appointed by the Mining Commissioner. To obtain relief from the provisions of this Act as thus interpreted the Transvaal British Indian Association petitioned Parliament in February, 1919.

(3) Although it was decided in the case of Motan *versus* the Transvaal Government that the Commissioner of Inland Revenue cannot refuse to issue general dealers licenses to coloured persons, yet as far as licenses for grocery shops, eating-houses, etc., are concerned, these are controlled by the municipalities, who have the right to withhold licenses if in the opinion of the Councils the applicant is not a desirable person to hold such license. Under this power Transvaal municipalities, especially that of Krugers-

dorp, consistently refused licenses to Indians on the sole ground that they were Indians. In several cases the Magistrate of Krugersdorp overruled the decision of the Council; and the municipalities have denied that they refused licenses to Indians as such. From this alleged systematic refusal of licenses by the municipalities the British Indian Association also petitioned Parliament for relief.

(4) By the Transvaal Law 3 of 1885 it was provided that Indians and Asiatics generally "may not be the owners of fixed property (i.e., land) in the Republic." This law is still in force. But by Act 31 of 1909 two or more persons may form a private limited liability company, and there was no provision of the law preventing such a company from owning land. Profiting by this state of the law, it became the practice of Indians to form such companies and by this means obtain that ownership of land which was denied them by the law of 1885. This was alleged to be a contravention of the spirit of the Smuts-Gandhi agreement, and aroused considerable feeling in the Transvaal.

In March 1919, in consequence of the petition mentioned above and of the acute bitterness that had arisen as a result of the controversy, the Union Parliament appointed a Select Committee to report on the matter. The Committee reported on April 30 and recommended (a) That the vested rights of Indians who were carrying on business in proclaimed Mining Areas in June 1914 should be respected. (b) That the vested rights of Indians who since that date obtained trading licenses and are carrying on business on such areas should also be respected. (c) That Indians should have the right to transfer their existing businesses to other Indians legally residing in the Transvaal. (d) That steps should immediately be taken to render it impossible for any Asiatic in the future to obtain a license for a new business. (e) That Transvaal law 3 of 1885 should be amended so as to extend the land-owning disabilities therein to any companies of which the controlling interest is possessed by Asiatics. Thus, "vested rights" were held to be actual existing, and not potential, rights; while "successors" were defined as "successors in title."

The Asiatics (Land and Trading) Amendment Act, 1919, gives effect to the recommendations of the Committee. It had a stormy passage through the House and entirely satisfied neither the Indians nor those whose feelings are anti-Indian. The Indians objected to the recommendations (e) and (d) above, and the anti-Indians fought hard against recommendation (c). To placate the anti-Indians and to obtain the passage of the Bill through the House, the Government had to promise to appoint a Parliamentary Commission to go into "the whole Asiatic question in the Transvaal." The Bill also aroused considerable feeling in India, and Mr. Montagu, the Secretary of State for India, suggested to the Union Government that India should be represented on the Commission by one official and one non-official. After negotiations between the Union Government and the Government of India, it was announced that India was to be represented "not on but before" the Commission by Sir William Robertson; and

in February of the present year the personnel of the Commission was published as consisting of the following four members:—Sir Johannes Lange, Puisne Judge of the Supreme Court; Griqualand West, chairman; Lieutenant-Colonel Scott Wylie, of Durban, Natal; Mr. William Duncan Baxter, M. L. A., of Cape Town; and Mr. Henry John Hofmeyr, of Johannesburg, Transvaal. At the same time the terms of reference were announced, as follows:—To enquire and report on the provisions of law affecting:—(a) The acquisition of land and rights affecting land in the Union by Asiatics and persons of Asiatic descent for trading or other purposes, (b) The trading or carrying on of business by such persons generally or in specified localities, (c) To consider whether it is in the public interest to alter the law in any respect, and (d) To make recommendations with regard to any difficulties and grievances which may have arisen in connection with (a) and (b).

In the meantime both sides are busy preparing their cases for presentation before the Commission. On the one hand a South African League (it was originally called the Anti-Asiatic League) was formed in the Transvaal to combat "the Asiatic menace", to urge "the stringent application" of all laws imposing disabilities on Asiatics, and to collect evidence for submission to the Commission. A large and influential congress at which were present delegates representing trade unions, Chambers of Commerce, and political, commercial and industrial interests in general, was held in Pretoria on September 4 and 5 to inaugurate the league. Violent anti-Indian speeches were delivered, and extreme resolutions were passed, including one which urged the Government to repatriate all Indians in the Transvaal, after paying them monetary compensation. On the other hand, in August an Indian National Congress was held at Johannesburg, which was attended by Indian delegates from all parts of the Union. Twenty-three resolutions were passed demanding the abolition of all disabilities, the granting of full civic rights, including political franchise and the right of interprovincial migration, and the provision of more liberal educational facilities.

In British Columbia, the trouble over Indian immigration came to a head in the early part of 1914, when a ship-load of Indians was despatched direct from the Far East to Vancouver. It was held up in the harbour there for several weeks. The passengers were not allowed to land. An appeal to the Canadian courts resulted in the rejection of their claim, and eventually they were shipped back to India. The arrival of the *Koniagata Maru* in Calcutta on September 26, 1914, was the occasion of a most lamentable incident. Anticipating an attempt to organise a political demonstration, the authorities provided special trains to convey the returned immigrants to their homes in the Punjab, and had taken power, under Ordinance V of 1914, to require them to do so; some sixty men immediately proceeded to their homes, but the balance under the leader, Gurdit Singh, endeavoured to force their way to Calcutta. They were turned back by the Military, and whilst arrangements were being made for a second special train,

opened fire on the Police and Officials. The Military dispersed the immigrants by fire, and the majority were afterwards arrested. Sergt. Eastwood, Calcutta Police, and Mr. Lomax, of the E. B. S. Railway, were killed; the Punjab Police had one killed and six injured; sixteen rioters were killed, as well as two onlookers. The Government of India appointed a commission under the Presidency of Sir William Vincent to investigate the matter and it took evidence in Calcutta and the Punjab.

There are some 4,000 Indians already settled in British Columbia, chiefly Sikhs. They work as agricultural labourers, in factories and lumber yards, and also on the railways. The desire amongst them to bring their wives and families out from India points to the fact that they are fairly prosperous and find the conditions of life in the Colony agreeable. The attitude of the Colonial authorities towards them is governed by the general objection to Asiatic immigration. It is felt that the unrestricted entry of Asiatics would threaten the existence of British Columbia as a "White man's country." The immigration of Japanese and Chinese is regulated by special treaties with their Governments. The number of Japanese is limited to a few hundreds annually. Chinese immigrants pay a head tax of 500 dollars on entry.

An exaggerated danger.—Making every allowance for the Dominion standpoint, those acquainted with the internal condition of India cannot but feel that the fears that the self-governing colonies may be deluged by Indian immigration are greatly exaggerated. The total number of Indians resident out of India is under two millions, and of these the majority are to be found in tropical countries. Ceylon alone has 900,000 of them. There is a quarter of a million in Mauritius, about another quarter of a million in British Guiana and the West Indies, and 230,000 in the Straits Settlements and Malay States. Of the self-governing Dominions South Africa has by far the largest share, her Indian population being a little under 160,000, Natal alone accounting for 133,000. But this is not the result of ordinary migration. The nucleus of the South African Indian community was formed artificially by Natal herself. Until 1911, when it was stopped by the Government of India, there was for many years a steady stream of indentured immigration into Natal to supply labour to the sugar and other industries of that colony. The natural increase of the Indian population in South Africa is now much larger than the increase by immigration. In the whole Australian Commonwealth there are not more than 7,000 Indians. The principal movement of Indians to the Dominions occurred in 1907-8, the total immigration being under 7,000. Of this number it is estimated that not more than 1,200 now remain in Canada, there having been a heavy exodus to the United States, while quite a number have returned to India. The significance of these trifling totals must be viewed in the light of the conditions prevailing in India. Here, it is true, there is a vast population. Were these 300 millions subjected to the economic conditions of Europe and were they imbued by

the adventurous and ambitious spirit of Europeans, there would be good ground for alarm in the Dominions at the possibility of an overwhelming influx of Indians. But those are precisely the conditions that do not obtain in the Indian Empire. The demand for labour in India is always greatly in excess of the supply. The tea-planters of Assam are obliged to compete with the Crown Colonies in an elaborate system of cooly recruitment. Labour-shortage is a chronic difficulty with the cotton mills of Bombay. As industrial expansion proceeds and agricultural methods improve, as more land is brought under cultivation, there must be a diminishing likelihood of emigration from India on any large scale. Add to this the inherent reluctance of the Indian to go far from home, and it will be apparent that the danger of "white men's countries" being swamped by Indian immigrants is at the least remote. It is never likely to assume such proportions as would pass the wit of statesmen to control.

Similarly, the fear of economic competition which has occasioned the present controversy in the Transvaal, is equally unfounded. The Indian trader in the Transvaal caters for a very limited portion of the community—chiefly natives, "coloured" persons, and what in South Africa are called "poor whites" (that is, white unemployed)—though a certain number of respectable Europeans with small incomes visit his emporiums surreptitiously. In this sphere the Indian succeeds because the white trader who caters for the same classes of the community is usually neither as industrious, as thrifty, as honest, nor as skilful as the Indian. The truth is that the Indian problem does not lie in the eyes of the South African stand alone. It is a part, and a minor part, of the larger problems of race and colour that he has to deal with in his endeavour to make South Africa a white man's country. He is not actuated by malice against the Indian as such; it is merely that the Indian problem, coming as it does on the top of the many other similar problems, is regarded by him as an extremely annoying and unnecessary "last straw." On the other hand, the Indian views the disabilities under which he is put as so many stigmata of inferiority. There is thus considerable emotion on either side, and the problem is accordingly difficult of solution. General Smuts is known to be favourably disposed towards Indians and his services to India as the only Dominion statesman in the War Cabinet have been many and conspicuous. He may be relied upon to do as much to alleviate the position of the Transvaal Indian as the very strong anti-Indian feeling in the North of the Union will allow. On their side, the Transvaal Indian and his sympathisers in India would do well to recognise that this feeling exists, and refrain from weakening General Smuts's hands by demanding at the present juncture full civic rights and complete political equality. Such demands are construed by the anti-Indians as being a breach of the Smuts-Gandhi agreement of 1914 (see above), which General Smuts offered as "a complete and final settlement;" and though a glance at the correspondence shows that Mr. Gandhi replied specifically that "some day or other these matters will require further and sympathetic consideration by the Government," yet nothing

could be more unwise than to prosecute extreme demands at a time when the strength of anti-Indian feeling in the North makes it impossible for those demands to receive logical, much less sympathetic, consideration.

Indentured Emigration.—The institution of indentured labour in the tropical colonies of the Empire is one of long-standing. As far back as 1864 indentured emigration from India to the British West Indies was in progress under Government control. In the case of several of the tropical colonies there has been no interruption since then in the steady inflow of several thousands of Indian labourers annually. In Mauritius, the Straits Settlements, the Federated Malay States and Natal the system for various reasons has come to an end; but in all those countries there is now a large population of Indians, permanent or temporary, engaged as free labourers or in independent positions. The principal colonies in which indentured emigration still prevails are British Guiana, Trinidad and Fiji. Even here, however, there has been a progressive decline during recent years, owing in part to the increased difficulty of recruiting in India. This difficulty arises entirely from the growing demand for labour within the Indian Empire, consequent upon industrial expansion.

The indentured system has been the subject of much controversy. It is disliked in India and by some people in England, because it seems to present features analogous to slavery—in that for the term of his indenture the labourer is not a free agent; he is *ad scriptus glebae*, and bound to serve the employer to whom he is assigned on terms which are absolutely fixed. In the colonies themselves the system is unpopular on two grounds—(1) it tends to depress the current rate of wages, (2) only a minority of the time-expired coolies become permanent settlers, the majority claiming their return passage and taking money out of the colony in the form of savings. From the point of view of the labourer himself, the indentured system, if it has any true resemblance to slavery, is a kind of bondage that is easily supportable. He is supplied with a free dwelling under highly sanitary conditions, his wages are fixed on the basis of the rate prevailing in the open market; no deductions are to be made therefrom for rent, hospital accommodation, medical attendance or medicine, which the estate proprietors are bound to provide. Free schooling is available for his children; and if, at the end of his indenture, he elects to remain in the Colony he is given a free grant of Government land. These are the conditions prevailing in British Guiana; but, with the exception of the grant of land they are similar to those in other colonies where indenture-immigration is in force. The permanent Indian population in British Guiana is 127,000; in Trinidad 113,000, in Fiji 40,000, in Mauritius 258,000 and 113,000 in Natal. Other colonies, such as Jamaica and Dutch Guiana (Surinam) have small communities, amounting in each to a few thousand only of time-expired Indian coolies. Ceylon, the Straits Settlements and the Federated Malay States continue to attract Indian labourers, chiefly from Southern India, although no indenture system now exists in those countries.

The method of recruiting indentured coolies was fully described in the 1916 edition of the Indian Year Book, pp. 467-8.

Indians in the Colonies.—Statement showing approximately the number of British Indian subjects in the various colonies and Dominions—

Trinidad	117,100
British Guiana	129,389
Jamaica	20,000
Fiji	44,220
Surinam	26,919
Reunion	3,012
Mauritius	257,697
Federated Malay States ..	210,000
Straits Settlements	Figures not available.
Cape Colony	6,606
Natal	133,031
Transvaal	10,048
Orange Free State	106
Southern Rhodesia	Figures not available.
Australia	Do.
New Zealand	Do.
Canada	Under 2,000 (the number is uncertain).

Commission of Inquiry Appointed.—

About the end of 1912, the Government of India appointed a Commission of two, Mr. J. McNeill and Mr. Chiman Lal, to report upon the conditions of life of the Indian immigrants in the Colonies. The Commissioners were also desired to submit recommendations as to any arrangements which may be considered desirable to promote their welfare. The main points to which they were to direct attention were: the housing of the labourers and the sanitary conditions in which they live; the adequacy of medical arrangements; whether tasks are moderate, hours of work suitable and wages adequate; whether the administration of justice is fairly conducted and whether labourers meet with any difficulties in prosecuting employers or defending themselves; whether the penalties imposed by the labour laws are in any case excessive or unsuitable; whether the labourers are subjected to undue restrictions, outside working hours, and whether they enjoy sufficient facilities for proceeding to the Protector of Immigrants or to the Magistrate to lodge complaints; the relations generally between employers and labourers; whether facilities are afforded to Indian labourers in social and religious matters; and whether repatriations are promptly made and whether immigrants experience any difficulty in obtaining repatriation. They were desired to report specially in respect of certain features of the system. These were connected with any excessive number of prosecutions of labourers by employers, the position of the Protector of Immigrants, the terms of

agreement which the emigrant is required to sign; the position of free Indians, female indenture, and suicides and immorality on the estates.

Merits of the system.—The Commissioners were engaged in their investigation for about 11 months. They visited Trinidad, British Guiana, Jamaica and Fiji, and also the Dutch Colony of Surinam which is permitted to recruit labourers under contract of indenture in India. Their report is in two parts, Trinidad and British Guiana taking up the first, and the rest the second part. After a detailed exposition of the state of things in respect of the points mentioned above in each of the colonies visited by them, the Commissioners observe: "We are convinced that notwithstanding our possibly disproportionate presentation of the unsatisfactory features of the existing system, a careful study of the facts elicited during our inquiry will result in the conclusion that its advantages have far outweighed its disadvantages. The great majority of emigrants exchanged grinding poverty with practically no hope of betterment for a condition varying from simple but secure comfort to solid prosperity. Emigrants live under very much better conditions than their relatives in India, and have had opportunities of prospering which exceeded their own wildest hopes. They became citizens of the colonies to which they emigrated and both they and their descendants have attained to positions commanding general respect and consideration." As regards the moral condition of the immigrants, the Commissioners observe: "There is no doubt that the morality of an estate population compares very unfavourably with that of an Indian village, and that the trouble originates in the class of women who emigrate." The rates of suicide among the indentured labourers are high as compared with those among free Indians in the colonies, and much higher than those among the population in the provinces of India. In Trinidad the suicide rate for the total Indian population was 134 per million and for the indentured 400 per million. The suicide rates among Indians in the other colonies were: British Guiana, unindentured, 52 per million, indentured 100 per million; Jamaica, 396 per million, suicides amongst the unindentured not being separately recorded; Dutch Guiana, unindentured, 49, indentured 91; Fiji, unindentured, 14 per million, indentured, 926 per million. According to a statement prepared by the Department of Commerce and Industry of the Government of India, the average suicide rates for India are, the Bombay Presidency 28·8 per million, the United Provinces whence most emigrants are drawn, 63 per million and Madras, the other chief source of supply to Fiji, 45 per million.

Indian Feeling.—For some years past, there has been a growing feeling amongst Indian leaders that the indentured system of labour was inconsistent with national self-respect, and should be stopped. This feeling originated in the belief that the treatment accorded to Indians in the self-governing Dominions especially in South Africa, was due to the Dominion people coming to think poorly of Indians as a race because of the class represented by indentured labourers. In 1910, the Government of India accepted a resolution moved by the late Mr. Gokhale

putting an end to the indentured system so far as Natal was concerned. In 1912, however, they opposed his resolution to abolish the system altogether. Opinion in India has been ripening fast against the system, and it is reinforced by the rapid industrial development of the country making largely increasing demands on the labour market, depleted to some extent by the ravages of plague during the last twenty years. The startling figures of suicide and the admissions as regards the prevalence of gross immorality among estate populations, have roused public feeling in the country, and this has been accentuated by well-authenticated stories of young caste women of respectability having been decoyed by dishonest recruiting agents to the emigration depots. Mr. C. F. Andrews, late of St. Stephen's College, Delhi, and now connected with the school conducted on his own original lines by Sir Rabinranath Tagore—the poet-laureate of Asia, as the Viceroy aptly called him—at Bolpur in the Bengal Presidency, was deputed by the Indian Citizenship Association of Bombay to visit Fiji, and to investigate the conditions which make for the frightful rate of suicide recorded in that colony. He was accompanied by Mr. W. Pearson, who is also associated with the Bolpur School. Messrs. Andrews and Pearson, it may be mentioned, visited South Africa where the Passive Resistance struggle led by Mr. Gandhi was at its height, and rendered valuable service in bringing about the settlement that was eventually arrived at.

Protected Emigration.—In a speech delivered in Council on September 5, 1916, H. E. the Viceroy stated that the Government of India were contemplating the control of the operations of persons engaged in supplying labour to the Colonies. "Labourers," said His Excellency, "have a right to emigrate if they wish, and it would be very unwise and very undesirable on our part to prevent them, and we are, therefore, trying to devise arrangements which will secure that recruitment in this country is conducted under decent conditions, that a proper sex ratio will be maintained and that on arrival in the country of their destination they will be properly treated and allowed to engage themselves on terms at least as free as those obtaining at present in the Malay Peninsula, where a labourer can leave his employer by giving a month's notice. I think it will be clear to all who have studied the question that the Government of India would be departing gravely from its duty if it allowed emigrant labour to leave this country without proper protection and safeguards. There are a certain number of labourers, I believe a very small number, who emigrate as genuine free labourers, that is to say unassisted by pecuniary help and uninvited by any interested agency. But, if we confine ourselves to the abolition of our existing indentured emigration, a position will arise in which the parties interested in procuring Indian labour will be free to induce labour to emigrate by pecuniary help under any conditions they like, so long as the labourer does not go under indenture. The abuses likely to arise out of such a state of things would be very serious. I need only refer to the state of affairs which existed before the amendment of the Assam Labour and Emigration

Act, in connection with so-called free labour. The consequence of this system was, as Sir Charles Rivaz put it in his speech before the Legislative Council in 1901, that a horde of unlicensed and uncontrolled labour purveyors and recruiters sprang into existence, who under the guise of assisting free emigration made large illicit gains by inducing, under false pretences, ignorant men and women to allow themselves to be conveyed to Assam. These emigrants were, it is true, placed under labour contracts on arriving in that province, but the abuses complained of arose in connection with the recruitment and not with the contract. Similarly when the system of indentured emigration first arose in India the only caution required was that intending emigrants should appear before a magistrate and satisfy him as to their freedom of choice and their knowledge of the conditions they were accepting. It was shown, in a report submitted in 1840, that abuses undoubtedly did exist in connection with recruitment in India, abuses which the constantly increased safeguards provided by successive Acts of the legislature were designed to correct. Uncontrolled recruitment cannot, it is clear, be permitted under any circumstances. Lord Hardinge promised, and I associate myself with him, to deal with certain points. These points were the better supervision of colonial recruiting in India, the insertion of information regarding the penal conditions attaching to labour contracts in the indenture signed by intending emigrants and the undesirability of labourers in the colonies being compelled to do work repellent to their caste ideas and religious beliefs. Regarding the first matter we have already consulted local Governments very fully when asking their views as to the precautions which will be required after the **abolition of indentured emigration**. As to the second point you are no doubt aware that Fiji has now abolished imprisonment for labour offences and other colonies are arranging to follow suit. But there will still be certain provisions remaining which we think should be brought to the notice of intending emigrants and we have arranged to do this as soon as the various colonial legislatures concerned have passed the amendments to which I have alluded."

Indenturing Abolished.—In 1917 the situation underwent a radical change. Whilst no official pronouncement was made, the idea gained popular acceptance that the Secretary of State had proposed that the system of indenturing should be continued for a further period of five years, pending the working out of an alternative system of recruitment. This aroused strong protests throughout the country. Whilst a reasonable desire was manifest not to add to the difficulties of the Government and of the colonies in time of war, it was felt that the continuance of a system open to such grave objections for ten years—five years for recruitment and five years for the new indentures to expire—was too long. Public meetings were held throughout the country. Government solved the difficulty by prohibiting all emigration from India, as a war measure, on account of the shortage of labour; subsequently assurances were given that the system would never be revived. Thus indenturing ended by a side issue, but nevertheless one which was quite definite. The question of existing indentures, however, still remained to be settled. During

1919 considerable steps were taken towards improving the conditions under which those Indians who still had to work under the system, lived; while in regard to Fiji, the Viceroy, on November 24, made the following announcement: "The conditions of labour in this island have without doubt been improved during the last few years but not, I am afraid, to the extent which we have demanded. Consequently I pressed for the cancellation of all outstanding indentures by the end of the present year. The Secretary of State for the Colonies has agreed to the cancellation of indentures on all estates on which the principal reforms recommended by Mr. Andrews have not been carried out on the 1st January, 1920, but I am not satisfied with this, and I have asked the Secretary of State to ascertain what would be the cost of commuting the remaining indentures and freeing every Indian labourer in Fiji on the 1st of January next."

Assisted Emigration.—Subsequently a committee sat in London to consider what form of assisted emigration should take the place of the indentures. Its report was issued about the middle of the year and the chief recommendations are here summarised.

Under this scheme the Indian will arrive in the colony entirely free from debt and of any liability for the cost of his introduction. He will be in no sense restricted to service under a particular employer, except that, for his own protection, a selected employer will be chosen for him for the first six months. This employer can be changed, with the approval of the Protector of Immigrants, if substantial reason can be adduced. From the time of his arrival the immigrant will be given land to cultivate for his own benefit. Each male adult employed in an agricultural industry will be granted for his personal use and cultivation a garden plot of one-tenth of an acre after six months' service and a larger plot of one-third of an acre will be made available whenever practicable by way of reward. At the end of three years' employment under any of the employers on the register steps will be taken to ensure that land is available for settlement in the simplest and cheapest manner. In each colony there will be a department responsible for the provision of sufficient land to meet all *bona fide* applications and for rendering it suitable for agriculture by adequate clearing, irrigation and drainage. These holdings will be up to five acres in extent, they will be subject to a reasonable annual rent in the case of lease-holds, and the settlements will be for a period of thirty years. Under the proposed system the immi-

grant can be proceeded against only by way of a civil suit in the ordinary course of law and will not be liable to any criminal penalties. A minimum wage will be fixed, subject to periodical revision. During the first twelve months the children under eleven years will be entitled to free rations while children under five will be given a face milk ration during the whole time that their parents remain in the service of an employer on the register. The provision of married quarters separate from the "single" quarters will be made compulsory upon all employers of more than twenty adult Indian immigrants and will be insisted upon so far as possible in the case of all other employers on the register. This register will contain the names of only "approved employers" that is to say of persons desirous of employing assisted emigrants, who have applied to the Protector of Immigrants and who have been found on inquiry to be suitable. Repatriation will be assisted when it is desired. The emigrants will receive for himself and his dependents half the passage money after three years' service and a larger proportion up to the whole cost after seven years' service.

With regard to recruitment, Emigration Agents will be licensed and paid fixed salaries, with possibly additional money grants for meritorious work. Their work will be supervised by Inspectors of Emigration, who will be men of standing on a graded scale of pay. Over them will be an Emigration Commissioner, who will be a Colonial Civil Service official, and a Protector of Immigrants, appointed by each Local Government to supervise emigration in the province affected. In each colony will be a Protector of Immigrants. The Emigration Depots will be visited by non-official gentlemen of standing in the district as also will be the Central Depot. The emigration of whole families will be encouraged but persons below the age of eighteen will be assisted to emigrate only when accompanied by their parents or guardians. Women unaccompanied by their families will not be assisted and the rule requiring a certain proportion of women to men will be abolished.

The report was published at a time when the political energies of India were concentrated on the development of the Indian constitution and the pending visit of the Secretary of State to discuss these questions on the spot. It attracted little attention. So far as opinion was expressed, whilst recognising that the system was an immense advance on the system of indenture, it was thought undesirable for Government to take so large a part in the direction of emigration to distant lands.

Indians in Great Britain.

More than sixty years have gone by since the Parsi community, in the persons of the late Dadabhai Naoroji and other members of the firm of Cama & Co., led the way in the sojourn of Indians in England for business purposes. This lead it has since maintained, though there are both Hindu and Mahomedan business men firmly established there. Nor are the professions unrepresented, for there are in London and elsewhere practising barristers, solicitors and medical men of Indian birth. Three Indians are on the Secretary of State's Council; and last year another in the person of Lord Sinha led the way as the first Indian to be raised to the peerage and to be appointed a member of the Home Government. The early years of the present century saw the gathering of a new Indian element in permanent residence—that of retired officials (particularly of the I. M. S.) and business men, or people of independent means who from preference or in order to have their children educated in England, leave the land of their birth and seldom if ever visit it again. Further, the stream of Indian summer visitors includes wealthy people who come regularly. In the first years of the war, before the transfer of the Indian Corps in France to Eastern theatres, thousands of our valiant Indian soldiers, wounded or invalided from Flanders, went to England to be nursed back to health in the well-equipped and admirably administered Indian hospitals, some in Hampshire but chiefly at Brighton where the fact is being commemorated by a permanent Indian provided memorial. The investigation of the Joint Committee on the Government of India Bill, 1919, resulted in the sojourn in London for some months of many of the most prominent figures in Indian political life.

The Students.

But under normal conditions it is the student community which constitutes the greatly preponderating element and creates an Indian problem. Its numbers multiplied ten or twelve-fold in the quarter of a century before the war, the increase being especially rapid after 1904 or 1905. There was indeed an artificial inflation some five years later when many youths (some of them ill prepared) were hurried off to the Inns of Court in order to be entered before the standard of the examinations qualifying for admission was raised. This sudden expansion was duly worked off but there was development in other directions, and particularly that of the technical and engineering schools and classes. After a very considerable temporary check caused by the European War the number rapidly expanded last year in spite of pressure in both passage and college accommodation. In addition to the ordinary graduate or under graduate student, there are many youths of good family, some of them heirs of Native States, admitted into our public schools, such as Eton and Harrow. There are always some 200 or 300 Indians, at the Inns of Court. Since the war there has been a welcome increase in the number of technical and industrial students. Altogether, including technical and medical students, there must be 500 young Indians in London. Edinburgh, Cambridge,

Oxford, Glasgow and Manchester stand next on the list, while there are smaller numbers at Birmingham, Leeds, Sheffield and Liverpool.

The Advisers.

It is well known that until a few years ago the young Indians, apart from inadequately supported unofficial effort and the chance of coming under the influence of English friends of their families, were practically left to their own devices. But in April 1909 Lord Morley, as a result of the investigations of an India Office Committee, created for their benefit a Bureau of Information and appointed Dr. T. W. Arnold to the charge of it under the title of Educational Adviser. The Bureau was located in due time at 21, Cromwell Road, together with the National Indian Association and the Northbrook Society, which were thus given spacious quarters for their social work among the young men, without incurring what would otherwise have been the prohibitive cost of heavy rent. (For Burmese students distinct club accommodation is provided in the commodious Albion House, St. Peter's Square, Hammersmith, W. C.). Lord Morley also established an Advisory Committee, mainly composed of influential Indian residents, but which has now ceased to exist, and in India corresponding provincial committees were formed to help and advise intending students. The work of the Bureau rapidly expanded, and in consequence Lord Crewe in 1912 re-organised the arrangements under the general charge of a Secretary for Indian students, Mr. (now Sir) C. E. Mallet who resigned at the close of 1916. He was succeeded by Dr. Arnold under the designation of Educational Adviser for Indian Students to the Secretary of State. Mr. N. C. Sen has followed Dr. Arnold as Local Adviser in London, and there are corresponding officers at the modern provincial universities.

Two strange delusions (in some cases they may be called deliberate misrepresentations) have been propagated in reference to these arrangements. One is that the India Office set up the Bureau in order to track down the wave of seditious sentiment which culminated in the assassination of Sir Curzon Wylie in 1909. As a matter of fact the Bureau was established three months before the commission of that crime, and was proposed at least a year previously. The object, as *The Times* observed in September 1908, was not "to put these young men into political leading strings, nor officially to restrict their liberty. It lies in doing all that is possible to facilitate their educational progress and their general welfare, and in bringing them under wholesome and helpful influence." Dr. Arnold accepted his appointment on the distinct understanding that there would be no espionage.

Removing Barriers.

It is no less of a delusion for the students to hold, as some of their elder fellow-countrymen have encouraged them to do, that the Bureau is responsible for restrictive rules and regulations of colleges and other institutions,

or at any rate for their continuance in spite of protests. So far from blocking the way, the Bureau has been singularly successful in opening closed doors and mitigating any real grievances. Its greatest triumph is that at Oxford and Cambridge, where naturally the difficulties of admission have been most pronounced, it has paved the way to the creation of University machinery to replace its own operations. The Oriental Delegacy at Oxford and the Inter-collegiate Indian Students' Committee at Cambridge have now undertaken all the work hitherto carried on by the Local Advisers, and thus Indian undergraduates are given a welcome *locus standi*. Every element of Government control, so disliked by many of the students, has been eliminated by this practical recognition by the two ancient universities of a special responsibility towards Indians imbibing their culture and traditions. The Secretary of State for India makes grants to these bodies, which are about equivalent to the cost of his former local representatives. Familiarity with the conditions is assured by the appointment of the late Local Advisers as the respective secretaries.

Sir T. Morison's Committee on State Technical Scholarships reported in 1913 that the difficulties encountered by young Indians in supplementing academic instruction by technical experience in factories and workshops are general in character, being also applicable to their English contemporaries, and that there is "on the whole very little evidence of a racial prejudice against Indians." Nor need any youth go to England under misapprehension as to the facilities for his education and their limitations. The excellent "Handbook of Information for Indian Students" issued by the National Indian Association and the Advisory Committee, now in its sixteenth edition (1919) supplies all relevant facts and advice; and on personal details, the Indian Advisory Committees can be consulted.

Persuasion not Coercion.

It is not the case, as some Anglo-Indians of the old type imagine, that the Bureau could easily exercise disciplinary control over all young Indians in London and elsewhere. The fact is that except in respect to holders of Government and some Native State Scholarships it has no disciplinary authority save when parents place their sons under the guardianship of Mr. N. C. Sen or some other Local Adviser, and even in these cases the control can only be exercised in connection with the administration of the regular allowances. The Bureau has had a most beneficial influence in saving scores of

young men from falling into debt, intemperance or marital folly, but this has been exercised not coercively but by friendly personal contact and keeping before them the obligation and necessity from every point of view of adhering to the purposes of culture and equipment for which they have gone to England.

The students have hosts of non-official friends and helpers. Under the presidency of Lord Hawke and the chairmanship of Lord Carmichael an Indian Gymkhana Club has a fine sports centre at Acton, the Mill Hill Park Club's ground having been taken over. The cricket eleven of the Club has an excellent record in matches at Lords and the Oval and with suburban clubs.

Students and the War.

The removal of misunderstanding should be materially promoted by the changed and gratifying conditions brought about by India's response to the call of Empire in the Great War. In this call young Indians in England shared by the formation of the Indian Field Ambulance Corps (which reached a total enrolled strength of 272) and in other ways. Good feeling has also been promoted by the remarkable records of a good proportion of Indian students at the universities when they were almost entirely depleted of Young British contemporaries doing national war service. The distinctions gained are evidence of the better type of Indian student that has recently gone to the United Kingdom and of the generosity with which the universities and colleges there allow Indians to share in the endowments they have at their disposal. While they have been at an advantage from the absence of English competitors, there is no reason to suppose that the standard of attainment required has been appreciably lowered for the benefit of Indians. But with the restoration of normal condition competition is becoming more severe and not least in respect to the pressing claims for admission to the older universities. To the full extent of their capability, with due regard to other responsibilities, the British universities are always ready to admit Indian students of approved ability and attainment; what they cannot stand is the lazy, incompetent and untrained man.

The whole position is sympathetically dealt with in the four annual reports of Sir Charles Mallet from 1913 to 1916 on the work of the Indian Students' Department. (Cd. 7160, Cd. 7719 Cd. 8127, and Cd. 8418 priced at 2½d. each, excepting Cd. 8127, which is 2d.)

Appointments to the Indian Services.

Full details of the regulations governing appointments to the Indian Services are published in the India Office List. The more essential particulars, except as regards the Civil Service and Police,—of which fuller details are given elsewhere in this book—are given below.

Indian Agricultural Service.

The appointments in the Indian Agricultural Service include those of Deputy Director of Agriculture, Agricultural Chemist, Economic Botanist, Mycologist, Entomologist, Professors of Agriculture, Chemistry and Botany at Agricultural Colleges, and the like. Some of these are included in the Imperial Department of Agriculture under the direct control of the Government of India, but the majority are included in the Departments of Agriculture of the several provinces of India. In some cases candidates will be appointed direct to these posts, but in most cases they will be appointed as supernumeraries, will undergo a further course of training in India in Indian agriculture, and will be appointed to posts, for which in the opinion of the Government they are considered suitable, on the regular establishment as vacancies occur. Appointments are made by the Secretary of State for India as occasion may require. Candidates must, as a rule, be not less than 23, nor more than 30 years of age. In selecting candidates for appointment, weight will be given to the possession of (a) a University degree in honours in science or the diploma of a recognised school of agriculture or other like distinction; (b) qualifications in a special science according to the nature of the vacancy to be filled; (c) practical experience. Importance is also attached to bodily activity and ability to ride, and selected candidates have to undergo an examination by the Medical Board of the India Office as to their physical fitness for service in India.

The salary attached to posts in the Indian Agricultural Service will ordinarily be:—

	Rs.
For the first year ..	400 per mensem.
„ second year ..	430 „
„ third year ..	460 „
„ fourth and subsequent years ..	500 rising by annual increments of Rs. 50 a month to Rs. 1,000 a month.

Candidates who are required to undergo a further course of training in India as explained above will be appointed on this scale of salary, commencing on a pay of Rs. 400. Where, for special reasons, a candidate is recruited for direct appointment to one of the regular posts under paragraph 1, his initial pay will be determined with reference to the special qualifications on the length of European experience required for the appointment for which he is specially selected, but his subsequent increments of salary will be regulated by the foregoing scale. In addition to this scale of pay, officers filling appointments directly under the Government of India, as distinguished from appointments under Local Governments (but not including officers holding supernumerary posts, the post of Inspector-General, or the post of Director of the Pusa Institute) will be eligible for local allowances conditional on approved good work, and the Government reserves to itself the fullest discretion as to granting, withholding, or withdrawing them.

Indian Civil Veterinary Department.

The officers of the Indian Civil Veterinary Department perform or supervise all official veterinary work in India, other than that of the Army, and are debarred from private professional practice in India. Their duties may be divided into three classes, under the following heads:—

- Educational work in veterinary colleges;
- Horse and mule breeding;
- Cattle disease and cattle breeding.

Appointments to this Department are made, as vacancies occur, by the Secretary of State for India. Candidates must not (except on special grounds to be approved by the Secretary of State) be over 26 years of age, and must

possess a diploma from the Royal College of Veterinary Surgeons. Evidence of a knowledge of bacteriology, and of capacity for carrying out original research, will be specially taken into account in estimating the claims of candidates. Good health, a sound constitution, and active habits are essential, and candidates must be certified by the Medical Board of the India Office to be physically fit for service in India.

Pay will be as follows:—On arrival in India Rs. 500 a month, rising by Rs. 40 each year to Rs. 1,100, which rate will continue from the beginning of the 16th to the end of the 20th year of service; after the beginning of the 21st year Rs. 1,200 a month.

Ecclesiastical Establishments (Church of England).

Appointments of Chaplains on Probation are made from time to time by the Secretary of State for India, as vacancies occur. Candidates for these appointments must be Priests who are between the ages of twenty-seven and thirty-four years, and have been for three years altogether in Holy Orders. Applications for nominations should be submitted to the Secretary of State.

A Chaplain will be on probation for three years (a); if confirmed in his appointment at the end of that period, he will be admitted as a Junior Chaplain.

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum for five years, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 per annum until promoted to be Senior Chaplains.

Chaplains on Probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after ten years' service, excluding the period of probation.

The retiring pay of Chaplains is regulated by the following scale:—

	Per annum.	£	s.	d.
After 23 years' service, with an actual residence in India of 20 years, including the period of probation	365	0	0	0

Ecclesiastical Establishments (Church of Scotland).

The appointments of Chaplains of the Church of Scotland on probation are made from time to time by the Secretary of State for India, according as vacancies occur. Candidates for these appointments must have been licensed for three years and be under thirty-four years of age. Applications for nominations should be submitted to the General Assembly's Committee on Indian Churches along with testimonials based on a personal knowledge of the candidate's qualifications. Chaplains will be on probation for three years (a); if confirmed in their appointment at the end of that period, they will be admitted as Junior Chaplains.

The salaries of Chaplains are:—

Senior Chaplains, Rs. 10,200 per annum, and then Rs. 12,000 per annum.

Junior Chaplains, Rs. 6,360 per annum for five years, and thereafter Rs. 8,160 until promoted to be Senior Chaplains.

On Medical Certificate. £ s. d.

After 18 years' actual residence in India, including the period of probation	292	0	0
After 13 years' ditto	173	7	6
After 10 years' ditto	127	15	0

Chaplains on probation, Rs. 5,760 per annum.

A Junior Chaplain becomes a Senior Chaplain after 10 years' service, excluding the period of probation.

The retiring pay of Chaplains is regulated by the following scale:—

	Per annum.	£	s.	d.
After 23 years' service, with an actual residence in India of 20 years, including the period of probation	365	0	0	0

On Medical Certificate.

After 18 years' actual residence in India, including the period of probation	292	0	0
After 13 years' ditto	173	7	6
After 10 years' ditto	127	15	0

Educational Appointments.

The Indian Educational Service comprises those posts in the Educational Department to which appointments are made in England by the Secretary of State, and is thus distinguished from the Provincial Educational Services, which are recruited exclusively in India. It consists of two branches, the teaching, including Principalships and Professorships in the various Government Colleges and Head Masterships in certain High Schools; and the inspecting, including Inspectorships of Schools; but officers may be transferred at the discretion of Government from one branch to the other, and the conditions of pay and service are the same for both. It also includes certain special appointments, such as those of Superintendents of Schools of Art, for which special qualifications are required and special terms of engagement are prescribed. Officers of the teaching branch may be required to undertake duties in connection with the supervision of students in hostels or boarding houses, and with the direction of their studies and recreations. Appointments are made by the Secretary of State as occasion may require. Only laymen are eligible, candidates must as a rule be not less than 23, nor more than 30 years of age, but exceptions are sometimes made as regards the maximum limit only. Candidates must be British subjects, and must furnish evidence of having received a liberal education.

In selecting candidates for appointment, weight will be given to the possession of (a) a University degree in Honours, or equivalent distinction; (b) experience as a teacher; (c) qualifications in special subjects, depending on the nature of the vacancy to be filled. In selecting candidates for inspecting appointments, weight is given to linguistic talent, capacity for organisation and knowledge, practical or theoretical, of educational methods.

The salaries paid are as follows:—A newly appointed Inspector or Professor receives Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month. When this point has been reached, the increase of his emoluments depends upon his promotion, and takes the form of allowances ranging from Rs. 200 to Rs. 500, in addition to the salary of Rs. 1,000. There are at present 30 such allowances. There is in every Province a Director of Public Instruction. The posts of Director of Public Instruction are reserved for the Indian Educational Service so long as members of that Service can be found well qualified to fill them. Their pay differs in different Provinces:—

Three receive a salary of Rs. 2,000—100—2,500 a month.

Two receive a salary of Rs. 2,000 a month.

One receives a salary of Rs. 1,750—50—2,000 a month.

Two receive a salary of Rs. 1,500—100—2,000 a month.

One receives a salary of Rs. 1,250 rising to Rs. 1,500 a month.

Head Masters are appointed on an initial pay of Rs. 500, rising by annual increments of Rs. 50 a month to Rs. 1,000 a month, except in cases in which Local Governments may prefer to recruit on the scale of Rs. 500 a month, rising by annual increments of Rs. 50 a month to Rs. 750 a month. Head Masters are eligible for subsequent transfer to inspectorships or, if qualified, professorships. In all cases, increments of salary are given for approved service only.

For the appointments dealt with above men only are eligible. There are, however, some posts in the Indian Educational Service which are open to women and these comprise appointments as Inspectresses of Girls' Schools, Princi-

pals of Training Colleges, and occasionally Headmistresses of Schools. The salary attached to these appointments is ordinarily Rs. 400 a month, rising by annual increments of Rs.20 a month to Rs. 500 a month.

The Secretary of State is sometimes requested by the Government of India to supply persons to fill temporary vacancies in the Indian Edu-

cational Service, generally professorships in Colleges. Such appointments are made for not less than a university year (about nine months), with a prospect, in the case of thoroughly approved service, of future selection to fill either a temporary or a permanent appointment. The salary is Rs. 500 a month, rising by annual increments of Rs. 50 a month.

Indian Forest Service.

The Secretary of State for India in Council makes appointments of Probationers for the Indian Forest Service, according to the numbers annually required.

Candidates must be not less than 19 but under the age of 22 years.

Candidates must have obtained a degree with Honours in some branch of Natural Science in a University of England, Wales or Ireland, or have passed the Final Bachelor of Science Examination in Pure Science in one of the Universities of Scotland. A degree in Applied Science will not be considered as fulfilling these conditions. Candidates will be required to produce evidence that they have a fair knowledge of either German or French.

The ordinary period of probation will be two years. During that time probationers will be required to pass through the Forestry course at one of the following Universities—Oxford, Cambridge or Edinburgh (subject to the arrangement of a suitable course)—becoming members of that University, if not so already; to obtain the Degree or Diploma in Forestry which it grants; and to satisfy such other tests of proficiency as may be deemed necessary.

During the vacations, the Probationers will, under the direction and supervision of the Director of Indian Forest Studies appointed by the Secretary of State for India in Council, receive practical instruction in such British and Continental forests as may be selected for the purpose.

The Secretary of State for India in Council will make payments to each Probationer at the rate of £120 annually, not exceeding a total of £240.

Probationers who obtain a Degree or Diploma in Forestry, and also satisfy such other tests of proficiency as may be prescribed, will be appointed Assistant Conservators in the Indian Forest

Department, provided they are of sound constitution and free from physical defects which would render them unsuitable for employment in the Indian Forest Service.

The sanctioned scale of the service at present is:—

	Rs.	
1 Inspector-General of Forests	2,650 a month.	
1 Assistant Inspector-General of Forests	....
4 Chief Conservators (Bombay, United Provinces, Burma and Central Provinces) ..	2,150	
23 Conservators, in three grades (including President, Forest Research Institute and College and one temporary post of Conservator for Kumaun Circle United Provinces)	1,900 1,700 1,500	Respectively.
208 Deputy and Assistant Conservators	....

An Assistant Conservator of Forests will draw pay at the rate of Rs. 380 a month from the date of his reporting his arrival in India rising by annual increments of Rs. 40 a month to Rs. 700 a month, thereafter by annual increments of Rs. 50 a month to Rs. 1,250 a month in the 20th year of service.

After a service of not less than 20 years, a retiring pension is granted not exceeding the following amounts:—

Scale of Pension.		Maximum Limit of Pension.
Years of Completed Service.	Sixtieths of Average Emoluments.	
20 to 24		Rs. 4,000 a year.
25 and above	30	Rs. 5,000 a year.

Indian Geological Survey.

The Geological Survey Department is at present constituted as follows:—

	Monthly Salary		
	Rs.	Rs.	Rs.
1 Director	2,000		
3 Superintendents	1,000 rising by	80 to	1,400
5 Assistant Superintendents—			
For the first five years	350	30	540
Thereafter	500	50	1,000
1 Chemist	500	50	1,000

Appointments to the Department are made by the Secretary of State for India. They will usually be made about July of each year, and the probable number of appointments will, if possible, be announced about two years in advance. The age of candidates should not exceed 25. Besides a good general education, a sound education in geology is essential: a

University degree and a knowledge of French or German will be regarded as important qualifications; and certificates of a high moral character will be required. Candidates must also have had one or two years' practical training in mines, or in technical laboratories, as may be required by the Government of India. First appointments are probationary for two years.

India Office.

Vacancies in the clerical establishment of the Secretary of State for India are filled from among the successful candidates at the General Examinations (Class I, and Second Division), which are held from time to time by the Civil Service Commissioners for appointments in the

Home Civil Service. The Examination for Class I. Clerkships is the same as the open Competitive Examination for the Civil Service of India. Further particulars may be obtained upon application to the Secretary, Civil Service Commission, Burlington Gardens, London, W.

Indian Public Works Department.

The Secretary of State for India in Council makes appointments of Assistant Engineers in the Public Works Department of the Government of India.

Candidates must have attained the age of 21, and not attained the age of 24 years.

Candidates must produce evidence that they have (1) obtained one of the University degrees mentioned in Appendix I., or (2) passed the A.M.I.C.E. examination, or (3) obtained such diploma or other distinction in Engineering as may, in the opinion of the Selection Committee, be accepted as approximately equivalent to the degrees mentioned.

The Engineer Establishment of the Indian Public Works Department consists of a staff of engineers, military and civil, engaged on the construction and maintenance of the various public works undertaken by the State in India.

2. The permanent establishment of the Department is recruited from the following sources:—

- (1) Officers of Royal Engineers.
- (2) Persons appointed to the Imperial Service by the Secretary of State by selection from the United Kingdom.
- (3) Persons educated at the Government Civil Engineering Colleges in India and appointed to the Provincial Services by the Government of India.
- (4) Occasional admission of other qualified persons,

3. The various ranks of the department are as follows:—

	Salary per annum (Imperial Service) Rs.
Chief Engineer, First Class	33,000
Second Class	30,000
Superintending Engineer, First Class ..	24,000
Second Class ..	21,000
Third Class ..	18,000
Executive Engineer, 20th year of service and following years	15,000
Executive Engineer, 19th year of service...	14,400
18th	13,800
17th	13,200
16th	12,600
15th	12,000
14th	11,400
13th	10,800
12th	10,200
11th	9,600
Assistant Engineer, 10th	9,000
9th	8,400
8th	7,920
7th	7,440
6th	6,960
5th	6,480
4th	6,000
3rd	5,520
2nd	5,040
1st	4,560

The increments will be given for approved service only and in accordance with the rules of the Department.

Exchange compensation allowance will not be granted to future entrants.

Promotions above the grade of Executive Engineer are dependent on the occurrence of vacancies in the sanctioned establishment, and are made wholly by selection; mere seniority is considered to confer no claim to promotion.

State Railways.

The Secretary of State for India in Council will, from time to time as may be required, make appointments of Assistant Traffic Superintendent on Indian State Railways.

Candidates must possess one or other of the following qualifications, viz.:—

- (a) Not less than two years' practical experience of work in the Traffic Department of a British or Colonial Railway together with evidence of a sound general education.
- (b) A degree or diploma of any teaching University in the United Kingdom granted after not less than three years' study in that University, or a technical

diploma or certificate recognized by the Secretary of State.

The establishment of the Superior Traffic Department of Indian State Railways consists of a staff of officers, military and civil, engaged on the various railways administered by the State in India. This establishment is recruited from the following sources:—

- (i) Officers of Royal Engineers;
- (ii) Persons appointed by the Secretary of State by selection from the United Kingdom;
- (iii) Persons appointed in India.
- (iv) Occasional admission of other qualified persons.

The various ranks of the Department are as follows :—

	Salary per annum.	Rs.
Traffic Managers	24,000	
Deputy Traffic Managers	18,000	
District Superintendents :—		
Class II., Grade 1	13,200	
„ Grade 2	12,000	
„ Grade 3	10,800	
„ Grade 4	9,600	
„ Grade 5	8,400	
Assistant Superintendents :—		
Class III., Grade 1	6,600	
„ Grade 2	5,400	
„ Grade 3	4,800	
„ Grade 4	3,600	
„ Grade 5	2,400-3,000	

The establishments of the Superior Locomotive and Carriage and Wagons Departments of Indian State Railways consist of officers engaged on the various railways administered by the State in India. These establishments are recruited from the following sources :—

- Persons appointed by the Secretary of State by selection from the United Kingdom ;
- Persons appointed in India ;
- Occasional admission of other qualified persons.

The various ranks of the Departments are as follows :—

	Salary per annum	Rs.
Locomotive Superintendents	24,000	
Deputy Locomotive Superintendent	18,000	
Carriage and Wagon Superintendents	18,000 or 21,000	
Deputy Carriage and Wagon Superintendents	15,000	
District Superintendents :—		
Class II., Grade 1	13,200	
„ Grade 2	12,000	
„ Grade 3	10,800	
„ Grade 4	9,600	
„ Grade 5	8,400	
Assistant Superintendents :—		
Class III., Grade 1	6,600	
„ Grade 2	5,400	
„ Grade 3	4,800	
„ Grade 4	3,600	
„ Grade 5	2,400-3,000	

Telegraph Department.

There are not at present any vacancies in the Superior Establishment of the Indian Telegraph Department, and it is considered unnecessary for the present to recruit any Assistant Superintendents from the United Kingdom. The arrangements for the future recruiting of

the Department have not been finally settled. The various ranks of the superior establishment are as follows :—

	Maximum Salary per mensem	Rs.
Director-General	3,000	
Deputy Director-General	2,000	
Directors	1,800	
Deputy Directors	1,600	
Chief Superintendents, 1st Class	1,400	
Chief Superintendents, 2nd class	1,250	
Superintendents, 1st Grade	1,000	
„ 2nd Grade	850	
Assistant Superintendents, 1st Grade	700	
„ „ 2nd Grade	550	
„ „ 3rd Grade	450	
„ „ 4th Grade	350	

His Majesty's Indian Army.

A certain number of appointments to the Indian Army are offered to Cadets of the Royal Military College, and a certain number to candidates from the Universities. All King's Cadets (British and Indian) and Honorary King's Cadets nominated by the Secretary of State for India in Council have the option, during their last term at the Royal Military College, of electing for appointment to the Unattached List for the Indian Army, or for appointment to commissions in British Cavalry or Infantry. The appointments to the Unattached List for the Indian Army remaining after the claims of the King's Cadets and Honorary King's Cadets (Indian) have been satisfied are allotted in order of merit to Cadets who satisfy the requirements of the Regulations respecting admission to the Royal Military College, and who elect to compete for such appointments, at each final Examination at Sandhurst.

King's India Cadetships.

Twenty King's India Cadets are nominated each half-year from among the sons of persons who have served in India in the Military or Civil Service of His Majesty or of the East India Company. A Candidate is not eligible for nomination as a King's India Cadet if he be under 17 or over 19½.

A candidate is not eligible for nomination, and his claims will in no circumstances be considered until he (a) has qualified at the Army Entrance Examination; or (b) is prepared to attend the next examination. The fees of King's India Cadets at the Royal Military College are not payable by the State, except in cases where, after due inquiry, their pecuniary circumstances are ascertained to be such as to justify the payment.

Honorary King's India Cadetships.

Three Honorary King's India Cadets are nominated annually by the Secretary of State for India. Such Cadets are appointed from—

- The sons of officers of the Indian Army; who were killed in action, or who have died of wounds received in action within six

months of such wounds having been received, or from illness brought on by fatigue, privation or exposure, incident to active operations in the field before an enemy, within six months after their having been first certified to be ill.

- (b) The sons of officers of the Indian Army, who have obtained the brevet substantive rank of Major or Lieutenant-Colonel, and have performed long or distinguished service.

An Honorary King's Cadetship carries with it no pecuniary advantage.

Queen Alexandra's Military Nursing Service for India.

The Nursing establishment is for duty with British officers and soldiers, and at present consists of:—

- 4 Lady Superintendents.
- 16 Senior Nursing Sisters.
- 71 Nursing Sisters.

The numbers in these grades are subject to alteration.

Nursing Sisters at the time of appointment must be over 27 and under 32 years of age. Candidates for the Service must have had at least three years' preliminary training and service combined in the wards of a British general hospital or hospitals of not less than 100 beds in which adult male patients receive medical and surgical treatment, and in which a staff of Nursing Sisters is maintained.

The duration of a term of service, for all grades of lady nurses, is five years. A lady nurse who has been pronounced by a medical Board to be physically fit for further service in India, may be permitted to re-engage for a second and third term at the option of the Government, and again for a fourth term, or until the age of compulsory retirement, if in all respects efficient and if specially recommended by the Commander-in-Chief in India. But a lady nurse will not under any circumstances be permitted to remain in the service in the grade of Lady Superintendent beyond the age of 55 years, or in either of the other grades beyond the age of 50 years.

Rates of Pay.

(In addition to free quarters, fuel, light, and punkah-pullers.)

	Rs.	per mensem.
Lady Superintendent ..	300	..
Senior Nursing Sister over five years in grade ..	225	..
Senior Nursing Sister under five years in grade ..	200	..
Nursing Sister over five years in grade ..	200	..
Nursing Sister under five years in grade ..	175	..

Royal Indian Marine.

All first appointments of executive officers in the Royal Indian Marine are made by the Secretary of State for India,

The limits of age for appointment to the junior executive rank, that of Sub-Lieutenant, are 17 and 22 years, and no candidate will be appointed who does not possess the full ordinary Board of Trade certificate of a Second Mate; certificates for foreign-going steamships will not be accepted.

PAY AND ALLOWANCES.

The present establishment of officers of the Royal Indian Marine and their allowances are as follows:—

	Grade pay.	Per mensem
		Rs.
33 {	Nine Captains ..	600
	Eleven Commanders ..	500
	The remainder (thirteen) ..	400
	Lieutenants of 14 Years' seniority (Lieut.-Commanders o 6 years' seniority) ..	375
	Lieutenants of 12 years' seniority (Lieut. Commanders of 4 years' seniority ..	350
	Lieutenant of 10 years' seniority (Lieut.-Commanders of 2 years' seniority) ..	325
72 {	Lieutenants of 8 years' seniority (Lieut. Commanders) ..	300
	Lieutenants of 6 years' seniority ..	275
	Lieutenants of 4 years' seniority ..	250
	Lieutenants under 4 years' seniority ..	200
	Sub-Lieutenants, joining with 1st Mate's Certificate ..	150
	Sub-Lieutenants, joining with 2nd Mate's certificate ..	135
	Cadets, without certificate ..	125
	Total 105	

In addition, 3 Commanders and 8 Lieutenants are at present employed in the Marine Survey of India.

A certain number of Shore, Port, and Marine Survey appointments are usually reserved for officers of the Royal Indian Marine. The numbers so reserved and the allowances attached (in addition to pay of grade), are as follows:—

	Allowances
	per mensem.
	Rs.
4 Shore appointments ..	400—1000
16 Port appointments ..	320—870
	per diem.
11 Marine Survey appointments ..	4—20

The sanctioned establishment of the Engineers' branch of the Marine numbers 82, of whom at present, 10 are Chief Engineers, and the remainder Engineers and Assistant Engineers.

STERLING EQUIVALENTS.

N.B.—In calculating the sterling equivalents of rupee salaries drawn by Europeans appointed in England to permanent service in India, it is necessary to bear in mind that in some cases Exchange Compensation Allowance is drawn in addition to salary. This allowance is at present at the rate of 6½ per cent. on the salary, subject to a maximum of Rs. 138-14-3 a month; but the rate is subject to alteration in the event of any material variation in the average rate of exchange between England and India.

The following table shows the approximate equivalent in sterling of the rupee Salaries stated, (a) when Exchange Compensation Allowance is not granted, (b) when it is granted at the rate just mentioned:—

Ruprees per Mensem	Ruprees per Annum.	(a) Equivalent without E. C. A.	Ruprees per Mensem.	Ruprees per Annum.	(a) Equivalent without E. C. A.	(b) Equivalent with E. C. A.	Ruprees per Mensem.	Ruprees per Annum.	(a) Equivalent without E. C. A.	(b) Equivalent with E. C. A.	Ruprees per Mensem.	Ruprees per Annum.	(a) Equivalent without E. C. A.	(b) Equivalent with E. C. A.
100	1,200	80	650	7,800	520	552	1,600	19,200	1,280	1,360	2,900	34,800	2,320	2,431
125	1,500	100	700	8,400	560	595	1,700	20,400	1,380	1,445	3,000	36,000	2,400	2,511
150	1,800	120	750	9,000	600	637	1,800	21,600	1,440	1,530	3,100	37,200	2,480	2,591
175	2,100	140	800	9,600	640	680	1,900	22,800	1,520	1,615	3,200	38,400	2,560	2,671
200	2,400	160	850	10,200	680	722	2,000	24,000	1,600	1,700	3,300	39,600	2,640	2,751
250	3,000	200	900	10,800	720	765	2,100	25,200	1,680	1,785	3,400	40,800	2,720	2,831
300	3,600	240	950	11,400	760	807	2,200	26,400	1,760	1,870	3,500	42,000	2,800	2,911
350	4,200	280	1,000	12,000	800	850	2,300	27,600	1,840	1,951	3,600	43,200	2,880	2,991
400	4,800	320	1,100	13,200	880	935	2,400	28,800	1,920	2,031	3,700	44,400	2,960	3,071
450	5,400	360	1,200	14,400	960	1,020	2,500	30,000	2,000	2,111	3,800	45,600	3,040	3,151
500	6,000	400	1,300	15,600	1,040	1,105	2,600	31,200	2,080	2,191	3,900	46,800	3,120	3,231
550	6,600	440	1,400	16,800	1,120	1,190	2,700	32,400	2,160	2,271	4,000	48,000	3,200	3,311
600	7,200	480	1,500	18,000	1,200	1,275	2,800	33,600	2,240	2,351	5,000	60,000	4,000	4,111

The Indian Civil Service.

In the early years of the eighteenth century the East India Company was still little more than a body of traders. The genesis of the Indian Civil Service is to be sought in the modifications which the Company underwent as it found itself year by year more involved in the government of the country with which it was trading. It was gradually realised that neither the pay nor the training of the Writers, Factors and Merchants of the Company was adequate to the administrative work which they were called on to perform. As a result this work was often indifferently done, and corruption was rife. To Lord Cornwallis is due the credit of having reorganized the administrative branch of the Company's service, in accordance with **three main principles** from which there has been hitherto no deviation. These were that every civil servant should covenant neither to engage in trade nor to receive presents, that the Company on their side should provide salaries sufficiently handsome to remove the temptation to supplement them by illegitimate means, and that, in order that the best men might be attracted the principal administrative posts under the Council should be reserved for members of the Covenanted Civil Service as it was called. The first of these principles is embodied not only in the covenant which every member of the service still has to sign on appointment, but also in the "Government Servants' Conduct Rules," which are applicable to every civil department, however recruited. As regards the second, the scale of salaries originally prescribed was so handsome that it has not yet been considered expedient to undertake any general revision of it. The list of reserved posts remains, too much the same as in 1793, though certain modifications have been introduced to meet Indian aspirations.

At first nominations to the service were made by the Directors, but this right was withdrawn by Act of Parliament in 1853, and since 1855 **appointments** have been open to public competition, all natural-born subjects of the Crown being eligible. The age-limits and other conditions of examination have varied considerably from time to time, but at present candidates are examined between the ages of 22 and 24. At first young officers were sent straight to their appointments on recruitment, but in 1800 Lord Wellesley established a college at Fort William for their preliminary training. This was not a success and in 1805 a college at Haileybury was substituted, and for 53 years nominees underwent a two years' training there before proceeding to India. At present a year's course at a British University is prescribed, and at the close of this year there is a further examination. Failure to pass this means final loss of appointment, and seniority in the service is determined by combining the result of the open competition and this final compulsory examination.

The Statute of 1793 (33 Geo. cap. 52) modified in 1861, sets forth the list of **offices reserved** for members of the Indian Civil Service. It includes among others the offices of secretaries and under-secretaries to governments, commissioners of revenue, Civil and Sessions Judges, Magistrates and Collectors* of Districts (in the regulation provinces) and joint and assistant Magistrates and Collectors. In the non-regulation provinces, many of the above posts are held by military officers. In addition to these reserved posts there are many other appointments which the Indian Civilian can hold. He is now, however, debarred from permanent appointment as Governor-General or Governor, the highest office he can attain being those of Lieutenant-Governor and Member of the Viceroy's Council.

Despite the complete eligibility of **natives of India**, and despite the numbers of Indian who now seek their education in England, comparatively few have succeeded in obtaining appointments by open competition. On the 1st of April 1913 only 46 of the 1,319 civilians on the cadre were natives of India. In 1870 an important Act (33 Vict. cap. 33) was added to the statute-book which allowed the appointment of "natives of India of proved merit and ability" to any of the offices reserved by law to members of the Covenanted Civil Service, such officers were known as Statutory or Uncovenanted Civilians. This method of appointment was dropped in 1889, and facilities were afforded to Indians for promotion through the ranks of the Provincial Service.

The young civilian, on joining his appointment in India, is attached to a district as **assistant to the Collector**. He is given limited magisterial powers, and after passing examinations in the vernacular and in departmental matters he attains to full magisterial powers and holds charge of a revenue subdivision. During this period he is liable to be selected for the judicial branch and become an Assistant Judge. In course of time promotion occurs and he becomes either Collector and District Magistrate, or District and Sessions Judge: this promotion does not generally occur before he has served for at least ten years. The District Judge is the principal civil tribunal of the district and wields extensive appellate powers. In his capacity as Sessions Judge he tries the more important criminal cases of the district.

The **Collector** is not merely chief magistrate and revenue officer of his district. He also forms a court of appeal from subordinate magistrates, supervises municipalities and local boards, is chief excise officer and district registrar, and in general represents Government in the eyes of the people. The Collector and his assistants are expected to travel over their

* The Chief Revenue Officer of a District is known as the Collector in the "regulation provinces" of Bengal, Madras, Bombay, Agra Deputy Commissioner, and his assistants are

known as the Collector in the "regulation and Behar and Orissa. Elsewhere he is the Assistant Commissioners.

charges; touring rules vary in different provinces, but in Bombay the Collector spends four and his assistants seven months in the year on tour.

By the time the highest grades in the offices of Collector or Judge are reached the Civilian has, as a rule, nearly completed the 25 years which are necessary before he can retire. Should he elect to continue in service, there are still posts to which he can look forward for promotion. On the one hand, he may become a Commissioner or even a Member of Council, and on the other, there are Judicial Commissionerships and seats on High Court Benches. Such is the normal career of a Civilian, but this, by no means, completes the account of his prospects, for nearly one-fourth of the service is, as a rule, employed in posts—some reserved and some not—out of the regular line. A number of Civilians are employed in the Imperial and Provincial Secretariats, some are in political employ in the Native States, others hold responsible positions in the Customs, Police, Salt, Post Office and other departments, or supervise big municipalities and public trusts.

The Civilian may retire after 25 years' service and in the ordinary way must retire on reaching the age of 55. He contributes throughout his service to a pension which is fixed, regardless of whether he has risen to be a Lieutenant-Governor, or has remained at the foot of the ladder. Every Civilian, moreover, married or single, subscribes to an annuity fund which provides for the widows and orphans of deceased members of the service.

Public Services Commission.

In July, 1912, it was announced that the King had been pleased to approve the appointment of a Royal Commission to examine and report upon the Public Services in India. The Royal Commission was constituted as follows:—

Chairman.—The Right Hon. Lord Islington, K.C.M.G.

The Earl of Ronaldshay, M.P.

Sir Murray Hammick, K.C.S.I., C.I.E., Indian Civil Service.

Sir Theodore Morison, K.C.I.E., Member of the Council of India.

Sir Valentine Chirol.

Frank George Sly, Esq., C.S.I., Indian Civil Service.

Mahadev Bhaskar Chaul, Esq., C.S.I., Member of the Governor of Bombay's Executive Council.

Gopal Krishna Gokhale, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Walter Culley Madge, Esq., C.I.E., Member of the Viceroy's Legislative Council.

Abdur Rahim, Esq., Judge of the Madras High Court.

James Ramsay MacDonald, Esq., M.P.

Herbert Albert Laurens Fisher, Esq., Fellow and Tutor of New College, Oxford.

The Terms of Reference were as follows:—

To examine and report upon the following matters in connexion with the Indian Civil Service, and other civil services, Imperial and Provincial:—

- (1) The methods of recruitment and the systems of training and probation;
- (2) The conditions of service, salary, leave; and pension.
- (3) Such limitations as still exist in the employment of non-Europeans and the working of the existing system of division of services into Imperial and Provincial;

and generally to consider the requirements of the Public Service, and to recommend such changes as may seem expedient.

Work of the Commission.—The Royal Commission visited India in the cold weather of 1912-13, and toured extensively in India, including Burma, confining their attention mostly to hearing the evidence of and relating to the Indian Civil Service. They subsequently sat in London and in October, 1913, again left for India to enquire into 28 Services other than the Indian Civil and the Provincial Services. They assembled first at Delhi on November 3rd, and examined Imperial officers and witnesses from the United Provinces, the Punjab and the North-West Frontier Province. They then assembled at Calcutta in the middle of December, to hear witnesses from Bengal, Bihar and Orissa, and Burma.

Early in February the Royal Commission went to Madras, and completed the tour at Bombay, where witnesses from Western India and the Central Provinces were heard.

The Commission returned to England in the spring of 1914, and drew up a report of which publication was delayed on account of the war, until January, 1917. This report is a large blue book of 529 pages. The actual report of the Commissioners, with their recommendations, runs to 65 pages, but the annexures covering the various departments occupy 300 pages. Special minutes relating to the report by members who sign it take up 22 pages, while a long minute, which really constitutes a separate report, by Mr. Abdur Rabim, of the Madras High Court, who regrets he has been unable to agree in the tenor of report or accept the more important of the conclusions of the commissioners, runs to no fewer than 94 pages.

Conclusions.—The Commission at the end of their report thus sum up their conclusions:—

At the end of the various annexures to our report we have summarised in detail the recommendations which we have made with regard to each service. The proposals we have put forward for increased expenditure have been framed without regard to the prior claims of the present war on the resources of the country, and may need to be given effect to gradually. Otherwise we have taken into account the existing situation. The main conclusions to which we have come are as follows:—

- (1) Where it is necessary to organise the public services into higher and lower branches,

this should be arranged on the basis of the work which they are required to do, and not, as is now in some instances the case, of the race of, or the salaries drawn by, their members, or any such artificial distinction (paragraphs 24 to 26).

(ii) Officers promoted from a lower into a higher service should ordinarily be given the same opportunities as officers who have been directly recruited and should be eligible on their merits for appointment to any post in their service. Both classes of officers should be shown on the same list and should take seniority amongst themselves from their date of entry on the list. Except in the case of the Indian civil service all promoted officers should also be made full members of the service into which they are promoted (paragraph 27).

(iii) The practice of employing military officers on civil duties should be continued in the medical, public works, railway, and survey of India departments, and subject to the conditions stated Military officers should also be eligible for appointment to the mint department. Elsewhere the practice of recruiting them should be allowed to die out, but this should take place gradually in the case of the civil service in Burma (paragraph 28).

(iv) The practice of employing members of the Indian civil service in other departments should be continued in the post office, and in the Northern India salt revenue, Indian finance and customs departments. Such officers should also continue to supervise the work of the land records (Burma), registration, salt and excise, and survey (Madras) departments. They should no longer be appointed directors of agriculture but rural commissionerships should be created and be manned from their ranks. The Inspector-generalships of police should no more be recruited for in the Indian civil service, but Indian civil servants, should continue to be eligible for these appointments subject to the claims of qualified police officers (paragraph 29).

(v) The services which lie between the higher and the subordinate services should no longer be designated "provincial" Services. If they are organised provincially they should ordinarily bear the name of their province; for example, the Madras civil service, the Bombay police service, and so on. If they are under the Government of India the terms class I and class II should be used for the two services. These terms should also be used in the education department (paragraph 30).

(vi) The services for which recruitment is now made normally in India should continue to be recruited for in that country. The Indian finance department should be added to this category. The military finance department should be similarly treated, if there are no military considerations to the contrary. Eventually, similar action should be taken with the customs department, but for the present some recruitment in Europe for this department should be permitted. The remaining services for which recruitment is now made wholly in Europe, or partly in Europe and partly in India, should be divided into three main groups. In the first should be placed the Indian civil service and the police department, in which it should be recognised that a preponderating proportion of

the officers should be recruited in Europe. In the second should come services like the education, medical, public works and so on, in which there are grounds of policy for continuing to have in the personnel an admixture of both western and eastern elements. For these services arrangements should be made for recruitment in both countries. In the third should be placed certain scientific and technical services, such as the agricultural and civil veterinary departments, etc., for the normal requirements of which it should be the aim to recruit eventually in India. To this end educational institutions should be developed in India on a level with those now existing in Europe so as to produce the necessary supply of candidates (paragraphs 31 and 32).

(vii) No system of state scholarships will provide a suitable method for increasing the number of non-Europeans in the public services (paragraph 35).

(viii) In certain services arrangements should be made for the appointment of a minimum number of Indians, but this should not be made a general practice for fear that the minimum may come to be regarded as a maximum (paragraph 35).

(ix) To secure an increase in the number of non-Europeans employed, so far as this is not obtained automatically by the proposals made with regard to organization and the place of appointment, different methods should be followed in different services, as detailed in the annexures. Speaking generally, technical institutions in India should be created or expanded; provision should be made for advertising vacancies; Indian members should be appointed to serve on the committees which will advise on the selection of recruits; and, finally, the statistics relating to the employment of members of the various communities should be published every ten years (paragraph 36).

(x) The question of the extent to which the services should be manned by the direct recruitment of untried officers and by the promotion of experienced officers from an inferior service should be settled separately for each service, as explained in the various annexures. But in every case opportunities should be created for young men, and direct recruitment should be encouraged wherever possible (paragraph 37).

(xi) In the present conditions of India no general system of competitive examinations as a means of entry to the public services is suitable, but where such a method exists it should ordinarily be maintained (paragraph 42).

(xii) When nominating direct recruits for admission to the services the authorities in India should act with the advice of committees which should not be purely departmental in character, but should contain persons in touch with educational institutions, and should also have a non-official and an Indian element. Publicity should be given to all vacancies, and applicants should be forbidden to bring outside pressure to bear on individual members of the committees. A similar procedure should be followed in England. Candidates for services recruited in India should ordinarily possess minimum educational qualification. This need not be identical for all candidates, but the standard for all should be the same (paragraph 44).

(xiii) In recruiting specialists care should be taken to draw upon the widest possible field (paragraph 45).

(xiv) Arrangements can best be made for communal representation in India by the exercise of the powers of Government under the system of nomination proposed. No hard and fast rule or proportion is suitable (paragraph 46).

(xv) Except where otherwise provided, direct recruits should be on probation for two years. A probationary course in England should be given only to recruits for the Indian civil and forest services, and in the latter only for so long as recruits are taken from Europe. As the schools of forestry of the United Kingdom are developed, recruits from Europe should be taken from them (paragraph 47).

(xvi) The question of training requires to be considered for each service separately, as explained in the various annexures. Inter-provincial conferences of officers responsible for the training of recruits should be encouraged (paragraph 48).

(xvii) In fixing the salaries of their employees, Government should pay so much and so much only as is necessary to obtain recruits of the right stamp, and to maintain them in such a degree of comfort and dignity as will shield them from temptation and keep them efficient for the term of their service (paragraph 49).

(xviii) Except where otherwise expressly provided, officers should be remunerated by an incremental scale of salaries on the compartment system. Where this is done the rules with regard to acting allowances should be revised (paragraphs 50 and 51).

(xix) Exchange compensation allowance should no longer be paid, but generally speaking the amounts now drawn on this account should be added to the salaries of officers (paragraph 52).

(xx) The salaries to be paid to Europeans and statutory natives of India respectively should be settled for each service separately and ordinarily in accordance with the principle set out in item xvii above, and not on any general consideration of race or place of recruitment. In services in which different rates are found to be suitable they should be fixed on the merits of each case, and no proportion should be laid down generally as between the amounts payable to the two classes of officers. In services the normal requirements of which will eventually be met in India, the standard scale of salaries should be that considered suitable for statutory natives of India, and special rates should be fixed for Europeans for so long as they are recruited. In certain services in which equality of pay has long been an established practice this should be maintained. In other services officers should be brought to an equality in the administrative ranks, and earlier in the education department. As a special case statutory natives of India recruited in Europe should be paid as Europeans (paragraphs 53 to 57).

(xxi) The salaries to be paid to officers should be as stated in the various annexures. For recruits in India from the ordinary graduate class, or their equivalent amongst members of the domiciled community, a general scale rising

from Rs. 250 to Rs. 500 a month should be introduced. Beyond this there should be selection scales of posts suitable to the circumstance of each service. For services requiring higher initial qualifications higher rates should be adopted (paragraph 58).

(xxii) The necessary steps should be taken to keep the cadres of the services up to a strength sufficient to cope with the work to be done (paragraph 61).

(xxiii) The calculations in accordance with which recruitment is made should be worked out with greater precision, and should be revised periodically with due regard to the requirements of leave and training. More precision is needed in fixing the annual rate of recruitment, and service tables should be prepared and kept up to date for each service or group of services. Distribution lists should be maintained for all services, which are recruited on a system, to show by groups of years the theoretical and actual number of officers present. Excesses or defects should be dealt with at the point where they occur. If in spite of these measures blocks in promotion are experienced, special allowances should be given on the merits of each case (paragraphs 61 to 65).

(xxiv) An expert committee should be appointed to simplify the present travelling allowance rules, to consider their sufficiency for everyday purposes, and to revise the classification of officers. Immediate measures should be taken to reimburse officers for all reasonable charges incurred by them on transfer from one station to another, whether personal to themselves or on behalf of their families and household establishments (paragraphs 66 to 68).

(xxv) The rules as to house allowance should be revised on the lines indicated (paragraph 69).

(xxvi) A Burma allowance should be given on the terms stated (paragraph 70).

(xxvii) Free passages should be given to officers of the services specified (paragraph 71).

(xxviii) Inefficient officer should be compulsorily retired (paragraph 72).

(xxix) Officers who are subject to the operation of article 459 of the civil service regulations should be retired at the age of 55, unless Government, in their sole discretion, decide to grant an extension of service (paragraph 73).

(xxx) There should be separate European service and Indian service leave rules to regulate the taking of long leave. Speaking generally, officers recruited under European conditions of salary should be subject to the European, and others to the Indian service leave rules (paragraphs 77 and 78).

(xxxi) The European service leave rules should be simplified, and greater facilities for leave on higher pay should be given by allowing privilege leave to be accumulated up to four months and furlough to be commuted subject to the restrictions stated (paragraphs 79 and 80).

(xxxii) The sterling amounts of the allowances payable under the European service

leave rules should stand to the rupee amounts in the proportion of 18 to 16 (paragraph 81).

(xxxiii) The Indian service leave rules should be simplified; officers subject to them should be allowed to accumulate privilege leave up to four months, and the allowances permissible should be increased to the extent stated (paragraphs 82 and 83).

(xxxiv) The rules relating to study leave should be revised; the arrangements for deputing officers to study particular problems should be made more elastic, and facilities should be given to officers on leave to study voluntarily such problems as interest them (paragraphs 84 to 86).

(xxxv) With the exceptions specified all officers should be under the same pension rules; all should serve normally for thirty years, but those recruited after the age of twenty-five in the services noted should be granted the concessions indicated, and all should be able to retire optionally on a reduced pension after twenty-five years' service. Government should be able to retire any officer after this period (paragraphs 87 to 91).

(xxxvi) The maximum limits of pension should be increased on the conditions stated and special additional pensions of amount stated should be drawn by the officers noted (paragraphs 92 and 93).

(xxxvii) A scheme for a general family pension fund, or for separate funds for different classes of officers, should be worked out on a self-supporting basis (paragraph 96).

Temporary Provisions.

At the beginning of the war a large number of undergraduates who had intended to compete for the Indian Civil Service abandoned their design in order to join His Majesty's Forces. Owing to the consequent dearth of suitable candidates at the open competition, and with the object of not penalising for their patriotism men who had joined the Army, the Secretary of State decided in 1915 to reduce the number of places to be filled by competition, and introduced a Bill into Parliament to provide for appointment to the service, during the continuance of the war and for a period of two years thereafter, otherwise than by the examination held in London in accordance with the regulations made under section 32 of the Statute of 1858 and section 97 of the Government of India Act, 1915. This Bill was passed as the Indian Civil Service (Temporary Provisions) Act, 1915. Provision was made in it for filling by nomination a maximum of three-fourths of the total number of vacancies to be filled during the period for which the Act remained in force. Further, in order to safeguard the interests of Indian candidates who might normally have expected to secure appointments if the number of vacancies offered for competition had not been reduced, the Secretary of State decided

that if in any year the number of Indians successful at the open competition was less than the average number of Indians who had secured appointments at the competitive examinations of the preceding ten years, the deficiency should be made up by the nomination of suitable Indian candidates who had appeared but been unsuccessful at the examinations of 1915 and later years.

The number of vacancies which have accumulated since 1915 is 155 and it is expected that the number for the two years 1919 and 1920 will be about 100. In other words there will be a total shortage of about 255 officers by 1920. After the cessation of hostilities the Secretary of State, under the powers vested in him by the Temporary Provisions Act of 1915, framed regulations for the nomination of candidates who have served during the war in His Majesty's Navy, Army or Air Forces. These regulations include the following:—

“ Every candidate for appointment to be made under these rules must have served in His Majesty's Naval, Military, or Air Forces during the war for at least one year, or, if his service be less than one year, have been retired or discharged on account of wounds or sickness resulting from such service.”

“ Every candidate must have been born on or after the 2nd August 1891, and on or before the 1st August 1899.

“ Every candidate must have received continuous and systematic education of high type until at least the age of 18, and must produce satisfactory evidence that if he has not received University education, he would have been justified in proceeding from school to a University with a view to taking high honours.

Nomination of Indians.—When introducing the Bill which became the Temporary Provisions Act of 1915, Mr. Chamberlain stated in Parliament that, while it was proposed to maintain by nomination the proportion of Indians who secured appointments, it was not the intention to increase their number by this method. In view, however, of the Report on Constitutional Reforms, and as an earnest of Government's intentions in the direction of Indianising the services, the Secretary of State has under consideration the question of inviting Parliament to allow him to nominate about 40 more Indians under the Act. About 35 vacancies are expected to be filled by the open competitions of 1919 and 1920 and the residue, approximately 180, will be filled by nomination under the regulations reproduced in paragraph 2 above. Three qualifying examinations have been held already in London and one each in Edinburgh and Dublin. It is proposed to hold another at these centres and also in India and other oversea centres in October 1919.

THE INDIAN MEDICAL SERVICE.

The Medical Service under the control of the Government of India consists of some 803 medical men recruited in England by competitive examination; and has as its primary duty the care of the native troops and of the British Officers and their families, attached to them.

But in the course of rather more than a century and a half other duties and responsibilities have accrued to it, so that there are in addition the provision of medical aid to Civil Servants and their families, the administration of the civil hospitals of the large towns, and

the supervision of the numerous small dispensaries provided either by the Government or private charity for the inhabitants of the larger villages. Moreover, the Service provides for the sanitary control of large areas, dealing with the sanitation of towns, protection of water supplies and the prevention of epidemic disease. It is also represented in the Native States by the Residency Surgeon, and in Persia by the Medical Officers to the British Consulates. The Jail Department is also administered in great part by Indian Medical Officers, generally in the dual capacity of Medical Officer and Superintendent; and up to quite recently the Officers in the Mints have been recruited from members of the medical profession. Lastly, the Service provides the men who are engaged in original research on diseases of tropical importance at the Bacteriological Laboratories which have arisen in India during the last fifteen years, and others who as Professors at the large medical schools have had the task of creating an indigenous medical profession which will make permanent throughout the Indian Empire the civilising influence of Western Medicine.

This remarkable combination of duties and responsibilities in a single Service has slowly evolved from the system, initiated in quite early days by the old East India Company, of providing "Chirurgeons" from England, on the nomination of the Board of Directors in London, for the care of the people and soldiers in the Indian "Factories," and on the ships trading with the East. Besides these men the Company maintained several medical services, including those of St. Helena, the West Coast of Sumatra, Prince of Wales Island, and the China Coast. The Surgeons on the Company's Indianmen were frequently utilised for emergent work in India, as in the case of the Mahratta War of 1780 and other military operations of that time, for duty with troops, and sometimes to fill vacancies occurring among those who would now be styled "civil surgeons."

Organisation.—The Indian Medical Service practically dates from the year 1764 when the scattered medical officers serving in India were united into one body: later, this was divided into the three medical "Establishments" of Bengal, Madras, and Bombay. In 1766, the Medical Service was divided into two branches, military and civil, the latter being regarded as primarily army medical officers, lent temporarily for civil duties, in which they formed a reserve for the Indian Army, and were consequently liable to recall at any time. This position was confirmed by the Council of Lord Cornwallis in 1788; and has been in existence ever since with great advantage to the military authorities in times of military stress. In 1898, the officers of the Service were given military rank, and since 1906 all the names have been borne on one list, though men on entering the service are allowed to elect a Presidency in which they will serve on entering the Civil Department.

The Service was thrown open to Indians by the India Act of 1853, the first competitive examination being held in January 1855, when

the list was headed by a Bengalee student who subsequently attained distinction. It was calculated by Lt.-Col. Crawford, I.M.S., (the talented historian of the Service) that from January 1855 to the end of 1910, eighty-nine men of pure Indian extraction had entered the Service. The proportion now shows signs of yearly increase. The total number of Indians at present in the Service is a little more than five per cent. of the whole: while, of the successful candidates during the past five years, 17·6 per cent. have been men born and bred in the country.

Method of Entry.—Entrance into the Service before 1914 was determined on the results of competitive examinations held twice a year in London, the Regulations regarding which, and the rates of pay, rules for promotion and pension relating thereto, may be obtained on application to the Military Secretary at the India Office. Candidates must be natural-born subjects of His Majesty, of European or East Indian descent, of sound bodily health, and, in the opinion of the Secretary of State for India in Council, in all respects suitable to hold commissions in the Indian Medical Service. They may be married or unmarried. They must possess, under the Medical Acts in force at the time of their appointment, a qualification registrable in Great Britain and Ireland. No candidate will be permitted to compete more than three times. Candidates for the January examination in each year must be between 21 and 28 years of age on the 1st February in that year, and candidates for the July examination must be between 21 and 28 years of age on the 1st August.

The candidate is examined by the Examining Board in the following subjects, and the highest number of marks obtainable will be distributed as follows:—

(1) Medicine, including Therapeutics	1,200 Marks.
(2) Surgery, including diseases of the eye	1,200 "
(3) Applied Anatomy and Physiology	600 "
(4) Pathology and Bacteriology	900 "
(5) Midwifery and Diseases of Women and Children ..	600 "
(6) Materia Medica; Pharmacology and Toxicology ..	600 "

N.B.—The Examination in Medicine and Surgery will be in part practical, and will include operations on the dead body, the application of surgical apparatus, and the examination of medical and surgical patients at the bedside.

Having gained a place at the entrance examination, the successful candidates will be commissioned as Lieutenants on probation, and will be granted about a month's leave. They will then be required to attend two successive

courses of two months each at the Royal Army Medical College, and at Aldershot respectively.

Officers appointed to the Indian Medical Service will be placed on one list, their position on it being determined by the combined results of the preliminary and final examinations. They will be liable for military employment in any part of India, but with a view to future transfers to civil employment, they will stand posted to one of the following civil areas:—(1) Madras and Burma; (2) Bombay, with Aden; (3) Upper Provinces, *i.e.*, United Provinces, Punjab and Central Provinces; (4) Lower Provinces, *i.e.*, Bengal, Bihar and Orissa and Assam.

The allocation of officers to these areas of employment will be determined upon a consideration of all the circumstances, including as far as possible the candidate's own wishes.

The whole course lasts for four months, after which the duly gazetted Lieutenants proceed to India, and prior to December 1918 were attached to Indian regiments. In December 1918 Station Hospitals for Indian Troops were instituted, a much needed reform which has been under consideration for a number of years. Indian Medical service officers are now attached to these hospitals for duty, and for the first years of their service are attached to native regiments in any part of the country. The doctor is an officer of the regiment, as was the case in the old days of the Army Medical Department. Of late years it has been proposed to form the members of the Service into a corps on the lines of the British Medical Service, by forming station hospitals for native troops, thereby releasing the doctor from regimental life. This reform appears to have fallen through for the present, but is likely to be brought into operation within a very few years.

Organisation.—The Head of the Service is the Director General, who is an official of the Government of India and its adviser on medical matters. He is also concerned with questions of promotion of officers to administrative rank, and of the selection of men for admission to the civil department. Attached to his office and under his general supervision is the Sanitary Commissioner with the Government of India. In each Presidency or Province there is a local head of the civil medical service and medical adviser of the local administration, who is either a Surgeon General, or an Inspector of Civil Hospitals of the rank of Colonel. The medical service in each province consists of the Sanitary Branch and the purely professional. The former is composed of Sanitary Commissioners of Districts, who by keeping large tracts of country under observation are in a position to advise their respective governments of the existence of epidemics, and on the proper methods of dealing with them and of preventing their spread. It is, however, through the Civil Surgeon that the visitor to India will come in contact with the Service. This official is something more than a general practitioner, as he is expected to be the leading medical and surgical authority in a large district consisting of a million or more of souls. Owing to the varied experience obtained in India by

the members of the Civil Medical Department, this official is generally a man of the highest professional attainments, especially so in the case of those senior men holding appointments in the larger towns. His duties are to give medical aid to the civil servants and treat families, and to administer the hospital which has been provided by Government in each headquarter town. In many cases too he will have the additional charge of the local jail, and be the Sanitary Adviser of the Municipality. Accustomed to meet the most serious emergencies of his profession, and to rely entirely on his own skill and judgment, the Civil Surgeon in India has given to the Indian Medical Service a reputation for professional efficiency which cannot be excelled by any other public medical service. Travellers in India falling sick within call of any of the larger towns can therefore rely on obtaining the highest professional skill in the shape of the ordinary Civil Surgeon of the I. M. S. During the last few years the service has not been popular amongst graduates of the Medical Schools of the United Kingdom and a variety of disturbing factors have contributed towards this unpopularity. These have now been dealt with or are under consideration, and with the increased rates of pay which have been sanctioned the grant of better concessions in the matter of study, leave and facilities for research, etc. It is hoped that the service will soon regain its former popularity, and that it will attract men of the highest attainments. The Secretary of State for India has realised the necessity for an Indian Medical Service of the highest possible efficiency and has stated that he considered the I. M. S. the pivotal service of all services in India.

A Parliamentary Paper containing correspondence between the Government of India and the Secretary of State, on the promotion of an **independent medical profession** in India and the possibility of limiting or reducing the cadre of the Indian Medical Service, was published during 1914. Writing in 1910, the Government of India said that it was impracticable to make any reduction in the number of Indian Medical Service officers employed solely on civil duties, that is to say, those not belonging to the war reserve. An independent profession trained on western lines was growing up in India but had to overcome its universal rival in the shape of *hakims* and others trained in indigenous methods: Government could do much to encourage the growth of this profession by making provision for the registration of medical practitioners qualified according to western methods. The Secretary of State, replying in November 1912, said that he was unable to contemplate any substantial reduction in the Indian Medical Service. As for the independent profession, he trusted that the experience of the working of the Bombay Registration Act might justify the introduction of similar legislation for other Provinces. He considered that the Indian Medical Service should be restricted to the military needs of the country both on account of economy and in order to increase as far as possible the number of important posts held by Indians; he was prepared to consider each new appointment on its merits, but any proposal for an

increase in the civil posts included in the cadre of the Indian Medical Service would be subjected to the closest scrutiny. In reply to that despatch, the Government of India wrote in March, 1914 :—" In view of the growing medical needs of the country which necessitate the employment of a larger staff of medical officers, some expansion of the Indian Medical Service is inevitable, and such expansion should not, in our opinion, be regarded from a different standpoint from the enlargement of any other cadre in response to the development of the work to be performed." In connexion with the

growing needs of the Service the Government of India appointed a Committee to examine and report on the question of the reorganization of the Medical Services in India, both Civil and Military. The Committee were to examine the question from the standpoint that it is desirable that there should be a unified Medical Service in India. The Report of the Medical Services Committee has been submitted and the recommendations made therein for the improvement of the various branches of the services are under the consideration of Government.

Pay and Allowance.—The following are the monthly rates of Indian pay drawn by officers of the Indian Medical Service when employed on the military side :—

RANK.										Grade Pay.
										Rs.
Lieutenant	..	..	..	..	..	..	..	..	..	550
Captain	..	..	..	..	..	..	..	..	..	700
„	after 5 years' service	..	..	..	..	..	..	..	..	750
„	after 7 years' service	..	..	..	..	..	..	..	..	800
„	after 10 years' service	..	..	..	..	..	..	..	..	900
Major	..	..	..	..	..	..	..	..	..	1,000
„	after 3 years' service as Major	..	..	..	..	..	..	..	..	1,150
Lieutenant-Colonel	..	..	..	..	..	..	..	..	..	1,550
„	„ after 25 years' service	..	..	..	..	..	..	..	..	1,600
„	„ specially selected for increased pay	..	..	..	..	..	..	..	..	1,750

Pensions and Half-Pay.—Officers are allowed to retire on pension on completing 17 years' service, the amount they receive varying with the precise number of years they have served. The lowest rate for 17 years' service is £300 per annum, and the rate for 30 years £700 per annum. The increases in pension for each additional year's service over 17 are somewhat higher in the last 5 than in the first 8 of the 13 years between the shortest and longest periods of pensionable service. All officers of the rank of lieutenant-colonel and major are placed on the retired list on attaining the age of 55 years : the greatest age to which any officer can serve being 60.

In accordance with the orders received from the Right Honourable the Secretary of State for India, sanctioning an increase in the pay of officers of the Indian Medical Service in civil employment, the pay of the various appointments concerned will, when they are held by officers of that service, be fixed at the rates shown in the accompanying statement with effect from the 1st December 1918.

2. Exchange compensation allowance, when admissible, is payable in addition to the rates referred to above.

3. The present classification of Civil and Agency Surgeons as "1st class" and "2nd class" is abolished with effect from the 1st December 1918.

4. The object of the revision is to attract to the service European candidates with the highest professional qualifications, and the question whether Indian candidates entering permanent service after 1st December 1918, shall be eligible for these increased rates of pay, and, if so,

to what extent and under what conditions, has been reserved for further consideration. All Indian officers already in permanent service of 1st December 1918, will be eligible for the rates of pay now sanctioned.

Appointments.	Pay Consolidated.	—
Director-General, Indian Medical Service	Rs. 3,500	
Surgeon-General to the Government of Madras, Bombay and Bengal.	3,000	
Inspector-General of Civil Hospitals, Bihar and Orissa, Assam, United Provinces, Punjab, Central Provinces and Burma.	2,600	
Deputy Director-General, Indian Medical Service ..	2,150	
Assistant Director-General, Indian Medical Service (Sanitary).	1,700	
Assistant Director-General, Indian Medical Service (Stores).	1,700	
Inspector-General of Prisons, Bengal, Bombay, Madras, Burma and United Provinces.	2,100—50— 2,300	
Inspector-General of Prisons, Punjab and Bihar and Orissa.	2,100	
Inspector-General of Prisons, Central Provinces ..	1,800	
Sanitary Commissioner with the Government of India	2,300—100— 2,800	
Provincial Sanitary Commissioners, Bengal, Bihar and Orissa, United Provinces, Punjab, Madras, Burma and Bombay.	1,800—60— 2,100	
Sanitary Commissioners, Central Provinces and Assam	1,550—50— 2,050	
*Chemical Examiner's Department	950—85 — 1,800	*Present incumbents. Lieut. Colonels after 25 years' service Rs. 1,850. Lieut. Colonels specially selected for increased pay, Rs.2,000.
Principal, Medical College, Calcutta	2,100	
Senior Medical Officer, Port Blair	1,750	
Surgeon Superintendent, Presidency General Hospital, Calcutta.	2,100	
Surgeon Superintendent, St. George's Hospital, Bombay.	2,100	
Superintendent, General Hospital, Rangoon ..	1,900	
1st Resident Surgeon, Presidency General Hospital, Calcutta.	1,200	
2nd Resident Surgeon, Presidency General Hospital, Calcutta.	1,000	
Resident Surgeon, St. George's Hospital, Bombay ..	1,000	
Surgeon to His Excellency the Viceroy	1,800	
Surgeons to Governors, Bombay, Madras and Bengal	1,200	
Police Surgeon, Rangoon	1,250	

Pilot Services.

Appointments to the Bengal Pilot Service are made by the Secretary of State for India and by the Government of Bengal; the latter appointments are limited to Anglo-Indians and Eurasians, and are made under separate regulations. In the case of appointments made by the Secretary of State, preference is given, *cæteris paribus*, to candidates who have passed through one of the training ships "Worcester" and "Conway."

Candidates for the Secretary of State's ap-

pointments must not be less than 18 and not more than 22 years of age. They must produce a Board of Trade or Colonial Certificate of Competency as a Second Mate, or any higher grade, for a foreign-going ship, and evidence of having served at sea not less than two years in a square-rigged sailing vessel of over 300 tons. The rates of pay and allowances of Leadsman Apprentices while on duty are as follows, without exchange compensation allowance:—

When on the running list:—

	Rs.
Junior Leadsman ..	..107 a month
Second Mate Leadsman ..	..135 a month
First Mate Leadsman ..	..160 a month

} Plus 50 per cent. of the lead money collected from the ships on which they do duty.

When employed as Chief and Second Officer:—
Chief Officers of pilot vessels, Rs. 160 a month.

As Second Officers of pilot vessels .. Rs. 135 a month.

Plus a mess allowance of Rs. 40 a month.

After five years' service a **Leadsman** Apprentice is allowed to appear at an examination to qualify him for appointment as **Mate Pilot**, but if he shows exceptional ability, and has passed each previous examination on his first attempt, bears a very good character, and is otherwise well reported on, this period may, with the special sanction of Government, be reduced to 4½ years. After three years' service as **Mate Pilot**, he is permitted to go up for an examination to qualify for appointment as **Master Pilot**, and, if successful, is promoted to that grade on the occurrence of a vacancy. Vacancies which occur in the grade of **Branch Pilot** are filled by promotion from the **Master Pilots'** grade, of men who have passed the **Branch Pilots'** examination. If the Local Government has reason to believe that a **Pilot** is, owing to physical unfitness of any kind, incapable of discharging his duties properly, it arranges for his medical examination and takes such action as may seem desirable when the results of that examination are communicated. In particular, **Pilots** are medically examined after the occurrence of any accident to the vessel in their pilotage charge, if the circumstances tend to show that the accident was in any way attributable to physical unfitness on the part of the **Pilot**.

Pilots are not entitled to any salary while on pilotage duty, but receive as their remuneration a share, at present 50 per cent., but liable to alteration at the discretion of the Government of Bengal, of the pilotage dues paid by ships piloted by them. The Government of Bengal reserves to itself the right to require all **Pilots** to obtain a **Home Trade Master Mariner's Certificate** before they are promoted to be **Senior Master Pilots**. Every member of the **Pilot Service** is subject to such rules as the Government of India or as the Government of Bengal under the control of the Government of India, may from time to

time, respectively, make in regard to discipline, leave, leave allowances, number of officers in the service, distribution into grades, tonnage of ships to be allotted to the several grades, etc., and in all respects he is amenable to such orders as may be passed by the Government of Bengal, and is liable to degradation, suspension and dismissal by the Government of Bengal for any breach of such rules or orders, or for misconduct.

Other Pilot Services.—Bengal is the only province that has a covenanted pilot service: elsewhere pilotage is under the control of the local Port Trust. In **Bombay**, for example, the Port Trust have drawn up the following rules for entry into the service:

To be eligible for admission to the **Bombay Pilot Service**, candidates must be **British Subjects**, and at least 21 years of age but not more than 32. They must hold certificates of competency as **Master** and excellent testimonials as regards conduct, character and ability. They will be examined in the Port Office for form and colour vision as prescribed by the Board of Trade, and also an extra form vision test of each eye separately and must undergo an examination by, and produce a certificate from, the Medical Officer appointed by the Port Trustees that they are physically fit, and are of a sufficiently hardy or strong constitution to perform a **Pilot's** duty and that they, to all appearance, enjoy good health. Any Probationer may, with the sanction of the Port Officer, go before the Examining Committee, and if he passes he will be eligible for appointment as a 3rd Grade **Pilot** when a vacancy occurs. A Probationer, not passing the required examination to qualify for performing a **Pilot's** duties within six months after the date of his appointment, is liable to be struck off the list. Promotion to the various grades in the **Pilot service** is generally given by seniority, but the Port Trustees reserve to themselves the right of passing over any **Pilot**. There are 18 **Pilots**, six in each grade, who are paid according to the number of vessels piloted. The average pay of a 1st Grade **Pilot** is about Rs. 850, 2nd Grade about Rs. 750 and 3rd Grade about Rs. 650.

The Press.

The newspaper Press in India is an essentially English institution and was introduced soon after the task of organising the administration was seriously taken in hand by the English in Bengal. In 1773 was passed the Regulating Act creating the Governor-Generalship and the Supreme Court in Bengal and within seven years at the end of the same decade, the first newspaper was started in Calcutta by an Englishman in January 1780. Exactly a century and a third has elapsed since, not a very long period certainly, a period almost measured by the life of a single newspaper, *The Times*, which came into existence only five years later in 1785; but then the period of British supremacy is not much longer, having commenced at Plassey, only twenty-three years earlier. Bombay followed Calcutta closely, and Madras did not lag much behind. In 1789 the first Bombay newspaper appeared, *The Bombay Herald*, followed next year by *The Bombay Courier*, a paper now represented by the *Times of India* with which it was amalgamated in 1861. In Bombay the advent of the press may be said to have followed the British occupation of the island much later than was the case in Calcutta. In Calcutta the English were on sufferance before Plassey, but in Bombay they were absolute masters after 1665, and it is somewhat strange that no Englishman should have thought of starting a newspaper during all those hundred and twenty-five years before the actual advent of *The Herald*.

The first newspaper was called *The Bengal Gazette* which is better known from the name of its founder as *Hicky's Gazette* or *Journal*. Hicky like most pioneers had to suffer for his enterprising spirit, though the fault was entirely his own, as he made his paper a medium of publishing gross scandal, and he and his journal disappeared from public view in 1782. Several journals rapidly followed Hicky's, though they did not fortunately copy its bad example. *The Indian Gazette* had a career of over half a century, when in 1833 it was merged into the *Bengal Harkaru*, which came into existence only a little later, and both are now represented by *The Indian Daily News* with which they were amalgamated in 1866. No fewer than five papers followed in as many years, the *Bengal Gazette* of 1780, and one of these, *The Calcutta Gazette*, started in February 1784, under the avowed patronage of Government, flourishes still as the official gazette of the Bengal Government.

From its commencement the press was jealously watched by the authorities, who put serious restraints upon its independence and pursued a policy of discouragement and rigorous control. Government objected to news of apparently the most trivial character affecting its servants. From 1791 to 1799 several editors were deported to Europe without trial and on short notice, whilst several more were censured and had to apologise. At the commencement of the rule of Wellesley, Government promulgated stringent rules for the public press and instituted an official censor to whom everything was to be submitted before publication, the penalty for offending against these rules to be immediate deportation. These

regulations continued in force till the time of the Marquis of Hastings who in 1818 abolished the censorship and substituted milder rules.

This change proved beneficial to the status of the press, for henceforward self-respecting and able men began slowly but steadily to join the ranks of journalism, which had till then been considered a low profession. Silk Buckingham, one of the ablest and best known of Anglo-Indian journalists of those days, availed himself of this comparative freedom to criticise the authorities, and under the short administration of Adam, a civilian who temporarily occupied Hastings's place, he was deported under rules specially passed. But Lord Amherst and still more Lord William Bentinck were persons of broad and liberal views, and under them the press was left practically free, though there existed certain regulations which were not enforced, though Lord Clare, who was Governor of Bombay from 1831 to 1835, once strongly but in vain urged the latter to enforce them. Metcalfe who succeeded for a brief period Bentinck, removed even these regulations, and brought about what is called the emancipation of the press in India in 1835, which was the beginning of a new era in the history of the Indian press. Among papers that came into being, was the *Bombay Times* which was started towards the close of 1833 by the leading merchants of Bombay, and which in 1861 changed its name to the *Times of India*. *The Bombay Gazette*, founded in 1791, ceased publication in 1914.

The liberal spirit in which Lord Hastings had begun to deal with the press led not only to the improvement in the tone and status of the Anglo-Indian press, but also to the rise of the Native or Indian Press. The first newspaper in any Indian language was the *Samachar Durpan* started by the famous Serampore Missionaries Ward, Carey and Marshman in 1818 in Bengali, and it received encouragement from Hastings who allowed it to circulate through the post office at one-fourth the usual rates. This was followed in 1822 by a purely native paper in Bombay called the *Bombay Samachar* which still exists, and thus was laid the foundation of the Native Indian Press which at the present day is by far the largest part of the press in India, numbering over 650 papers.

From 1835 to the Mutiny the press spread to other cities like Delhi, Agra, Gwalior, and even Lahore, whereas formerly it was chiefly confined to the Presidency towns. During the Mutiny its freedom had to be temporarily controlled by the Gagging Act which Canning passed in June 1857 on account of the license of a very few papers, and owing still more to the fears of its circulating intelligence which might be prejudicial to public interests. The Act was passed only for a year at the end of which the press was once more free.

On India passing to the Crown in 1858, an era of prosperity and progress opened for the whole country in which the press participated. There were 19 Anglo-Indian papers at the beginning of this period in 1858 and 25 Native papers and the circulation of all was very small. The number of the former did not show a great rise in the next generation, but the rise in

influence and also circulation was satisfactory. Famous journalists like Robert Knight, James Maclean and Hurris Mookerji flourished in this generation. The *Civil and Military Gazette* was originally published in Simla as a weekly paper, the first issue being dated June 22nd, 1872. Prior to and in the days of the Mutiny the most famous paper in Northern India was the *Mofussilite*, originally published at Meerut, but afterwards at Agra and then at Ambala. After a lively existence for a few years in Simla the *Civil and Military Gazette* acquired and incorporated the *Mofussilite*, and in 1876 the office of the paper was transferred from Simla to Lahore, and the *Gazette* began to be published daily. During Lord Lytton's vicereignty a reactionary policy was pursued towards the vernacular press which was restrained by a special Act passed in 1878. With

the advent of Lord Ripon in 1880, the Press Act of Lytton was repealed in 1882. The influence of the native press especially grew to be very great, and its circulation too received a great fillip. This may be said to have gone on till 1897, when India entered upon a disastrous cycle of years during which plague and famine gave rise to grave political discontent which found exaggerated expression in the native press, both in the vernacular and in English. The deterioration in the tone of a section of the press became accentuated as years went on and prosecutions for sedition had little effect in checking the sinister influence.

In 1910 Lord Minto passed a Press Act applicable, not like Lytton's Act, to the peccant part alone, but like Canning's measure, to the entire press. (*Vide infra* "The Indian Press Law.")

Number of Printing Presses at Work, and Number of Newspapers, Periodicals, and Books Published.

Province.	Printing Presses.	News-papers.	Periodi-cals.	Books.		
				In English or other European Languages.	In Indian Languages (Vernacular and Classical) or in more than one Language.	
Bengal	721	113	221	499	2,219	
Bihar and Orissa	136	22	34	101	689	
United Provinces	497	99	216	278	1,996	
Punjab	217	94	167	187	1,588	
Delhi	52	10	13	10	187	
North-West Frontier Province	20	1	....	....	....
Burma	163	47	75	23	235	
Central Provinces and Berar	81	16	14	16	104	
Assam	40	13	8	1	52	
Ajmer-Merwara	14	3	6	3	75	
Coorg	1	....	1	....	....
Madras	681	242	1,898	581	2,025	
Bombay	478	145	520	220	2,009	
Total, 1916-17	3,101	805	3,173	1,919	11,149	
Totals	1915-16	3,237	857	2,927	1,541	10,658
	1914-15	3,102	847	2,988	1,602	11,477
	1913-14	3,020	827	2,848	1,477	10,712
	1912-13	2,823	673	2,395	1,662	9,651
	1911-12	2,780	656	2,268	1,596	9,988
	1910-11	2,751	658	1,902	1,578	10,063
	1909-10	2,736	726	829	2,112	9,934
	1908-9	2,594	738	805	1,687	8,345
	1907-8	2,571	753	1,062	1,524	7,095

Newspapers and News Agencies registered under the Press Rules and arranged alphabetically according to Station where they are published and situated.

NOTE.—*News Agencies are distinguished by an asterisk.*

Stations.	Title in full.	Day of going to Press.
Agra	Kayastha Hittkari	1st, 8th, 16th, and 24th of every month.
Ahmedabad	Ahmedabad Samachar	Daily.
	Coronation Advertiser	Wednesdays.
	Gujarati Punch	Sundays.
	Jaina Samachar	Sundays.
	Kathiawar and Mahikantha Gazette.	Saturdays.
	Political Bhomiyo	Thursdays.
Ajmer	Praja Bandhu	Saturdays.
	Rajasthan	Fridays.
	Rajasthan Samachar	Thursdays.
Akola, Berar	Berar Samachar	Sundays.
Akyab	Arakan News	Tuesdays and Fridays.
Aligarh	Aligarh Institute Gazette	Wednesdays.
Allahabad	Abhyudaya	Fridays.
	Hindustan Review	On first of every month.
	Leader	Daily, except Tuesdays.
	Muslim Herald	Daily.
	Pioneer	Daily.
	Reuter's Telegram Company, Ltd. Independent .. ..	..... Daily.
Allahabad Katra	Sarva Shikshak .. ..	.....
Amraoti	Bharat	Wednesdays.
	Kartawya	Tuesdays.
	Pramod Sindhu	Mondays.
	Veer Shaio Sanjeevinee	Mondays.
Amreli	Islamic News	Mondays.
Amritsar	Khalsa Advocate	Weekly.
	Punjab Durban	Daily.
	Vakil	Bi-Weekly.
Amroha	Ittihad	Saturdays.
Bagerhat	Jagaran	Sundays.
Bangalore	Daily Post	Daily.
	Kasim-ul-Akhbar	Mondays and Thursdays.
Bankipore (Patna)	Behar Bandhu	Fridays.
	Behar Herald	Saturdays.
	Express	Daily.
	Search Light	Saturdays and Wednesdays.
Barisal	Barisal Hitaishi	Sundays.
Baroda	Jagriti	Weekly.
	Shree Sayaji Vijaya	Thursdays.
Bassein, Burma	Bassein News	Tuesdays and Fridays.
Batticaloa (Ceylon)	Lamp	Every other Saturday.
Belgaum	Belgaum Samachar	Mondays.
Benares City	Awazai Khalk	Every Wednesday.
	Bharat Jiwan	Sundays.
	"Hindi Kesari"	Wednesdays.
	Indian Student	27th of each month.
	Kashi Temperance Samachar	Monthly.
	Mahamandal Magazine	Monthly.

Stations,	Title in full.	Day of going to Press.
Bhavnagar	Jain Jainhasan	Saturdays. Tuesdays.
Bihar (Patna)	Ittehad	Wednesdays.
Bijapur	Karnatak Vaibhav Advocate of India Akhbar-i-Islam Akhbar-i-Soudagar Andhra Patrika Argus Associated Press * Bombay Chronicle Bombay Guardian Bombay Samachar Catholic Examiner Gujarati Illustrated Sporting Review Indian Industries and Power Indian Investors' Referee Indian National News Agency Indian Social Reformer Indu Prakash Kaiser-i-Hind Jam-e-Jamshed Muslim Herald Muslim Times Native Opinion O Anglo-Lusitano Parsi and Praja Mitra Railway Times Rast Goftar Reuter's Indian Journal Reuter's Telegram Company, Ltd. Sandesh Sanj Vartaman Shri Venkateshwar Samachar Sudhakar Sunday Tatler Times of India Times of India Illustrated Weekly. United Press Syndicate * Young India	Saturdays. Daily. Daily, except on Sundays. Wednesdays. Sundays. Daily. Fridays. Daily. Saturdays. Saturdays. Saturdays. On the 15th of each month. Fridays. Saturdays. Daily, except Sundays. Saturdays. Daily, except Saturdays. Daily, except Sundays. Fridays. Tuesdays. Saturdays. Daily. Fridays. Sundays. Daily. Daily, except Sundays. Fridays. Saturdays. Sundays. Daily. † Wednesdays. Twice Weekly.
Bowringpet	Kolar Gold Fields News	Tuesdays.
Budaon	Akhbor Zulqarnain	6th, 13th, 20th, and 27th of every month.
Calangute (Goa)	A Voz do Povo	Saturdays.

† With *The Times of India* there are published every Tuesday a separate Supplement *Indian Motoring* and every Friday an *Indian Engineering Supplement*.

Stations.

Title in full.

Day of going to Press

Calcutta

Albalagh	Fridays.
Amrita Bazar Patrika	Daily.
Asian	Fridays.
Associated Press * .. ..	.....
Bangabasi	Wednesdays.
Basumati	Daily.
Bengalee	Daily, except Sundays.
Bharata Mitra	Thursdays.
Calcutta Intelligence Syndicate ..	.....
Calcutta Samachar	Daily.
Capital	Thursdays.
Catholic Herald of India	Tuesdays.
Collegian	Bi-monthly.
Empire (Calcutta Evening News).	Daily, except Sundays.
Englishman	Daily.
Hindoo Patriot	Daily, except Saturdays.
Hitabadi	Wednesdays.
Indian and Eastern Engineer ..	14th of each month.
Indian Daily News	Daily, except Sundays.
Indian Engineering	Thursdays.
Indian Express	Once a month.
Indian Field	Wednesdays.
Indian Methodist Times	Last day of month.
Indian Mirror	Daily.
Indian News Agency .. ..	.....
Indian Planters' Gazette	Saturdays.
Indian Public Health	15th of each month.
Indo-British Press Agency .. ..	.....
Industry	Monthly.
Madhuri	Monthly.
Marwari	Saturdays.
Mussalman	Thursdays.
Moslem Chronicle and Muham- madan Observer.	Thursdays.
Nayak	Daily.
Railways and Shipping	11th, 15th and last day of every month.
Reis and Rayyet	Saturdays.
Reuter's Telegram Company, Limited. .. ..	.....
Sanjibani	Wednesdays.
Samay	Wednesdays.
Sidagat	Daily.
Statesman	Daily.
Swadesh	Sundays.
Tarjuman	Daily.
Telegraph .. ..	.....
Times of India Illustrated Weekly.	Wednesdays.
United Press Syndicate* .. ..	.....
Vishwamitra	Daily.
Young Men of India	Monthly.
Balamitram	Monthly.
Kerala Sanchari	Wednesdays.
Manorama	Tuesdays and Fridays.
Mitavadi	Weekly.
West Coast Reformer	Sundays and Thursdays.
West Coast Spectator	Wednesdays and Saturdays.

Calicut

Stations.	Title in full.	Day of going to Press.
Cawnpore	Azad	Wednesdays.
	Cawnpore Journal	Daily.
	Englishman Bulletin	Daily.
	Pratap	Saturdays.
	Reuter's Telegram Company, Limited.	.....
	Zamana	25th day of every month.
Chandernagore	Probartak	Bi-monthly.
Chinsurah	Education Gazette	Tuesdays.
Chittagong	Jyoti	Wednesdays.
Cochin	Cochin Argus	Saturdays.
	Malabar Herald	Saturdays.
Cocanada	Ravi	Thursdays.
Colombo	Ceylon Catholic Messenger	Tuesdays and Fridays.
	Ceylon Independent	Daily.
	Ceylon Morning Leader	Daily.
	Ceylon Observer	Daily.
	Ceylonese	Daily.
	Dinakara Prakasa	Mondays, Tuesdays, Thursdays and Saturdays.
	Dinamina	Daily, except Sundays.
	Dravida Mitran	Wednesdays and Saturdays.
	Gnanartha Pradipaya	Mondays and Thursdays.
	Islam Mittiran	Saturdays.
Contal	Lakmina	Daily except Sundays.
	Sarasavi Sandaresa	Tuesdays and Fridays.
	Times of Ceylon	Daily.
	Nihar	Mondays.
	Utkal Deepica	Fridays.
Dacca	Dacca Gazette	Mondays.
	Dacca Prakash	Sundays.
	East Herald	Sundays. Daily.
Darjeeling	Darjeeling Visitor and Advertiser.	Mondays.
	Indian Daily News (Darjeeling Edition).	Daily.
Dehra Dun	Bulletin	Twice Daily.
Delh	Al-Mustansir	Daily.
	Associated Press .. ..	.....
	Durbar Bulletin	Daily.
	Hamdard	Daily.
	Indian News Agency .. ..	.....
Dharwar	Morning Post	Daily, except Sundays.
	Pioneer Supplement	Daily.
	Vijaya	Saturdays.
	Weekly Urdu Bharat Sewak	Saturdays.
	Dharwarvritt	Wednesdays.
Dharwar	Karnataka Patra	Fridays.
	Karnatakavritta and Dhananjaya	Tuesdays.
	Raja Hansa	Daily.

Stations.	Title in full.			Day of going to Press.
Dhulia		Khandesh Vaibhav		Fridays.
Dibrugarh	{	Englishman Bulletin		Daily.
		Times of Assam		Fridays.
Gaya		Kayastha Messenger		Sundays.
Guntur		Deshabhimani		Daily.
Hubli		Kannad Kesari		Fridays.
Hyderabad, Deccan	{	Musheer-i-Deccan		Daily.
		Sahifa-i-Rozana		Daily.
		Usman Gazette		Daily.
Hyderabad, Sind ..	{	Hindvasi		Daily.
		Musafr		Saturdays.
		Sind Journal		Wednesdays.
		Sind Mail		Daily.
		Sindvasi		Daily.
Jaffna	{	Ceylon Patriot and Weekly Ad- vertiser.		Tuesdays.
		Jaffna Catholic Guardian		Saturday Mornings.
		Sithia Veda Pathukavalan		Fortnightly.
		Vasavilan Jaffna Native Opinion		Fortnightly.
Jaffna (Vannarponnai) ..		Hindu Organ		Mondays and Thursdays.
Jorhat		Englishman Bulletin .. ..		.....
Jubbulpore ..	{	C. P. Standard		Daily.
		Christian Sahayak		Weekly.
		India Sunday School Journal ..		Third Thursday of every month.
Kakina		Rangpur-Dikprokash		Fridays.
Kankhal		Saddhram Pracharak		Tuesdays.
Karachi	{	Daily Gazette		Daily.
		Karachi Argus		Wednesdays.
		Karachi Chronicle		Saturdays.
		New Times		Daily.
		Parsi Sansar		Saturdays.
		Praja Mitra		Tuesdays and Fridays.
		Phoenix		Tuesdays and Fridays.
		Reuter's Telegram Company, Li- mited.		.....
		Sind Observer		Wednesdays and Saturdays.
		Sind Sudhar		Saturdays.
		Star of India		Saturdays.
Khulna		Khulna Basi		Saturdays.
Kolhapur City		Vidyavilas		Fridays.
Kottayam	{	Kerala Bharati		Tuesdays and Fridays.
		Malayala Manorama		Wednesdays and Saturdays.
		Nazrani Deepika		Tuesdays.
Kurunegala		Abhinawa Kawata Angana ..		Days prior to the 1st and 15th of every month.
Lahore	{	Akhbar-i-Am		Daily.
		Associated Press * .. ..		.....
		Bulletin .. ..		.....
		Civil and Military Gazette ..		Daily, (Sundays excepted).
		Desh		Daily

Stations.	Title in full.	Day of going to Press.
Lahore	Haq	Fridays.
	Hindustan	Wednesdays.
	Paisa Akhbar	Daily.
	Punjabee	Daily.
	Punjab Observer	Wednesdays and Saturdays.
	Punjab Samachar	Fridays.
	Rajput Gazette	1st, 8th, 16th and 24th of every month.
	Reuter's Telegram Company, Limited.	.....
	Tribune	Daily, except Sundays.
	Urdu Bulletin	Daily.
Larkana	Watan	Thursdays.
	Khairkhah	Saturdays.
	Larkana Gazette	Fridays.
Lucknow	Advocate	Wednesdays and Saturdays.
	Anand	Thursdays.
	Indian Daily Telegraph	Daily.
	Indian Witness	Wednesdays.
	Kaukab-i-Hind	Wednesdays.
	Kayastha Mutual Family Pension Fund News.	15th day of every month.
Lyallpur	Muslim Gazette	Tuesdays.
	Oudh Akhbar	Daily, except Sundays.
	Loyal Akhbar	Wednesdays and Saturdays.
	Al-Mazmun	On the first of every month.
Madras	Andhra Patrika	Tuesdays.
	Anglo-Indian	Thursdays.
	Associated Press	Weekly.
	Christian Patriot	Weekly.
	Hindu—See against Mount Road.	.....
	Indian Patriot	Daily.
	Indian Railway Journal	15th of every month.
	Jarida-i-Rozgar	Saturdays.
	Justice	Daily.
	Law Times	Saturdays.
	Madras Mail	Daily.
	Madras Times	Daily, except Saturdays.
	Muhhammadan	Mondays and Thursdays.
	Mukhbir-i-Deccan	Wednesdays.
	New India	Daily.
	Reuter's Telegram Company, Limited.	.....
Madura	Shamshul Akhbar	Mondays.
	Swadesa Mitran	Daily.
	United Press Syndicate, Madras Agency.	.....
	South Indian Mail	Mondays.
Mandalay	Burma Magnet	Saturdays.
Mapuca	Upper Burma Gazette	Daily.
	Futuro	Daily.
Margao (Goa) ..	Noticias	Mondays.
	Ultramar	Mondays and Fridays.

Stations.	Title in full.				Day of going to Press.
Matheran	Matheran Jottings				Tuesdays and Fridays.
Mattancheri	Chakravarthi				Saturdays.
Mirpurkhas	Mirpurkhas Gazette				Wednesdays.
Mirzapur City	Khichri Samachar				Saturdays.
Moradabad ..	{ Al-Musheer				4th, 11th, 18th, 25th of every month.
	{ Colonel				1st, 8th, 16th and 24th of every month.
	{ Meston News				4th, 12th, 20th and 28th of every month.
	{ Sitara-i-Hind				4th, 12th, 20th and 28th of every month.
Moulmein	{ Moulmein Advertiser				Daily.
	{ Rammenna Times				Tri-Weekly.
Mount Road, Madras ..	Hindu				Daily, except Sundays.
Mussoorie ..	{ Mussoorie Times				Thursdays.
	{ Pioneer Mussoorie Bulletin				Daily.
Muttra	Inniskilliner				7th of each month.
Muvattupuzha	Kerala Dheepika				Saturdays.
Mymensingh	Charu Minir				Tuesdays.
Nagercoil	Travancore Times				Tuesdays.
Nagpur	{ Desha-Sewak				Mondays.
	{ Hitavada				Fridays.
	{ Maharashtra				Tuesdays.
	{ Nagpur and Berar Times				Fridays.
	{ Young Patriot				Sundays.
Naini Tal	Naini Tal Gazette				Wednesdays.
Navsari	Independent				Saturdays.
Nova Goa	{ Heraldo				Daily, except Mondays.
	{ Odebate				Mondays.
	{ O'Heraldo				Daily, except Sundays and holidays.
Ootacamund	South of India Observer and Nilgiri News.				Daily issue except Sundays.
Pandharpur	Pandhari Mitra				Sundays.
Panjim Goa	O'Crente				Saturdays.
Parur	Uttara Tharaka				Saturdays.
Peshawar	{ Afghan				Daily.
	{ Peshawar Daily News				Daily.
	{ Reuter's Telegram Company, Ltd.				.....
	{ Deccan Herald				Daily.
Poona	{ Dnyana Prakash				Daily, except Mondays.
	{ Evening Despatch				Daily.
	{ Kesari				Tuesdays.
	{ Lokasangraha				Daily.
	{ Maharatta				Sundays.
	{ Poona Mail				Daily.
	{ Rajkaran				Sundays.
	{ Servant of India				Weekly.

Stations.	Title in full.	Day of going to Press.
Quetta	{ Baluchistan Gazette Baluchistan Herald Daily ..	{ Wednesdays and Saturdays. Daily.
	{ Quetta News War Bulletin Desabhimani	{ Daily. Wednesdays.
Quilon	{ Malayali	{ Wednesdays and Saturdays.
Rajkot	{ Kathiawar Times	{ Wednesdays and Sundays.
	{ Burma Sunday Times Rangoon Gazette Rangoon Times Rangoon Mail	{ Daily, except Mondays. Daily, except Sundays. Saturdays.
Ratnagiri	{ Bakool	{ Saturdays.
	{ Satya Shodhak	{ Sundays.
Rawalpindi	{ Punjab Times	{ Saturdays and Wednesdays.
Satara	{ Shubha Suchaka	{ Fridays.
Satara City	{ Prakash	{ Wednesdays.
Secunderabad	{ Hyderabad Bulletin	{ Daily.
	{ Notice Sheet	{ Daily.
Shahjahanpur	{ Sarpunch	{ Daily.
Sholapur	{ Kalpataru	{ Sundays.
	{ Sholapur Samachar	{ Tuesdays.
Silchar	{ Englishman Bulletin	{ Daily.
	{ Surma	{ Sundays
Simla	{ Associated Press	{
	{ Indian News Agency	{
	{ Indian War Cry	{ 27th of each month.
	{ Pioneer Daily Bulletin Reuter's Telegram Company, Limited.	{ Week days.
Sukkur	{ Sindhi	{ Saturdays.
	{ Sind Advocate	{ Thursdays.
Surat	{ Deshi Mitra	{ Thursdays.
	{ Deshodaya	{ Tuesdays.
	{ Gujrat Mittra and Gujarat Darpan	{ Saturdays.
	{ Jain Mitra	{ Wednesdays.
Sylhet	{ Peoples' Business Gifts	{ Monthly.
	{ Praja Pokar	{ Wednesdays.
	{ Surat Akhbar	{ Sundays.
Tamluk	{ Paridarsaka	{ Wednesdays.
Tinnevely	{ Tamalika	{ Saturdays.
Tichur	{ Kalpaka	{ Monthly.
Tiruvalla	{ Lokaprasam	{ Mondays.
	{ Kerala Taraka	{ Wednesdays.
Trivandrum	{ Bharata Kesari	{ Bi-Weekly.
	{ Western Star	{ Tuesdays, Thursdays, and Saturdays.
Vizagapatam	{ Andhra Advocate	{ Fridays.
Wal	{ Modavritta	{ Mondays.
	{ Vrittasar	{ Mondays.
Yeotmal	{ Harikishore	{ Sundays.

INDIAN PRESS LAW.

The Newspapers (Incitements to Offences) Act, 1908, was passed in view of the close connexion between the perpetration of outrages by means of explosives and the publication of criminal incitements in certain newspapers. The Act deals only with incitements to murder, to offences under the Explosive Substances Act, 1908, and to acts of violence. It gives power in such cases to confiscate the printing press used in the production of the newspaper, and to stop the lawful issue of the newspaper. The procedure adopted in the Act follows the general lines of that provided in the Code of Criminal Procedure for dealing with public nuisances, with the addition that the final order of the magistrate directing the forfeiture of the press is appealable to the High Court within 15 days. It is further provided that no action can be taken against a press save on the application of a Local Government. When an order of forfeiture has been made by the magistrate, but only in that case, the Local Government is empowered to annul the declaration made by the printer and publisher of the newspaper under the Press and Registration of Books Act, 1867, and thereafter neither that newspaper nor any other which is the same in substance can be published without a breach of the law.

The Indian Press Act, 1910, was a measure of wider scope, the main object of which was to ensure that the Indian press generally should be kept within the limits of legitimate discussion.

The Act deals, not only with incitements to murder and acts of violence, but also with other specified classes of published matter, including any words or signs tending to seduce soldiers or sailors from their allegiance or duty, to bring into hatred or contempt the British Government, any Native Prince, or any section of His Majesty's subjects in India, or to intimidate public servants or private individuals.

The different sections of the Act have in view (i) Control over presses and means of publication; (ii) control over publishers of newspapers; (iii) control over the importation into British India and the transmission by the post of objectionable matter; (iv) the suppression of seditious or objectionable newspapers, books, or other documents wherever found.

As regards the first of these objects, it is laid down that proprietors of printing presses making a declaration for the first time under section 4 of the Press and Registration of Books Act, 1867, shall give security, which may, however, be dispensed with by the magistrate at his discretion; that the proprietors of presses established before the passing of the Act may similarly be required to give security if and when they are guilty of printing objectionable matter of the description to which the Act

applies; and that, where security has been deposited, Local Governments may declare such security forfeit where it appears to them that the press has been used for printing or publishing such objectionable matter. When the initial security so deposited has thus been forfeited, the deposit of further security in a larger sum is required before a fresh declaration can be made under section 4 of the Press and Registration of Books Act, and, if thereafter, the press is again used for printing or publishing objectionable matter the further security deposited and the press itself may be declared forfeit.

Control over publishers of newspapers, the second main object of the Act, is provided for in a similar manner. The keeping of a printing press and the publishing of a newspaper without depositing security when required are punishable with the penalties prescribed for failure to make the declarations required by sections 4 and 5 of the Press and Registration of Books Act, 1867.

Other provisions deal with the cases of books or pamphlets printed out of India or secretly in India. The more efficient control over the importation and transmission by post of objectionable matter of the kind described in the Act is given by empowering the customs and post office authorities to detain and examine packages suspected of containing such matter, and to submit them for the orders of the Local Government.

The fourth object of the Act is attained by authorising the Local Government to declare forfeit any newspaper, book or other document which appears to it to contain matter of the prohibited description, and upon such a declaration the Act empowers the police to seize such articles and to search for the same.

In any case in which an order of forfeiture is passed by the Local Government, an application may be made to the High Court on the question of fact whether the matter objected to is, or is not, of the nature described in the Act. For the most part the object of the Act has been secured, as regards the local press, without recourse to the power of confiscating security.

Press Association of India.—At the end of 1915 this Association was formed in Bombay. According to the articles of constitution "Its objects shall be to protect the press of the country by all lawful means from arbitrary laws and their administration, from all attempts of the Legislature to encroach on its liberty or of the executive authorities to interfere with the free exercise of their calling by journalists and press proprietors, and for all other purposes of mutual help and protection which may be deemed advisable from time to time." Members pay a minimum subscription of Rs. 10 annually. The affairs of the Association are managed by a Council.

Societies : Literary, Scientific and Social.

AGRICULTURAL AND HORTICULTURAL SOCIETY OF INDIA (Calcutta).—Founded 1820. Annual subscription Rs. 32. Entrance fee Rs. 8. *Secretary*, S. Percy-Lancaster, F.R.H.S., 1, Alipore Road, Alipore.

AGRI-HORTICULTURAL SOCIETY OF BURMA.—*Secretary*, Capt. W. H. Allen, Victoria Park, Kandawglay.

AGRI-HORTICULTURAL SOCIETY OF MADRAS.—Established 1833. Quarterly subscription for members in Class A Rs. 7, in Class B Rs. 3. *Secretary*, R. S. F. Simpson, Teynampett, S. W., Madras.

ANTHROPOLOGICAL SOCIETY OF BOMBAY.—Founded 1886, to promote the prosecution of Anthropological research in India; to correspond with Anthropological Societies throughout the world; to hold monthly meetings for reading and discussing papers; and to publish a periodical journal containing the transactions of the Society. Annual subscription Rs. 10. *Secretary*, Shams-ul-Ulma Dr. Jivanji Jamshedji Modi, B.A., Ph. D., C.I.E., Town Hall, Bombay.

ASIATIC SOCIETY OF BENGAL (Calcutta).—*Secretary*, G. H. Tipper, M.A., 57, Park Street, Calcutta.

BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA.—The Institute was inaugurated on the 6th of July 1917, the 80th birthday of Sir R. G. Bhandarkar, at the hands of H. E. Lord Willingdon who became its first President. Its objects are to provide an up-to-date Oriental Library, to train students in the methods of research and to act as an information bureau on all points connected with Oriental Studies. Sir R. G. Bhandarkar has already bequeathed to the Institute his valuable private library of Oriental books. Since the 1st of April 1918 the Government of Bombay have transferred to the Institute the unique collection of manuscripts at the Deccan College together with a maintenance grant of Rs. 3,000 a year. Government have likewise entrusted to the Institute for the next five years the sole administration of the Budget grant of Rs. 12,000 a year on account of publication. The Institute has undertaken to edit the *Mahabharata* critically at the request of the Chief of Aundh who has promised a grant of Rs. 6,000 annually for that purpose. Minimum membership dues Rs. 10 a year or Rs. 100 compounded for life. *Secretary*, Dr. P. D. Gune, Fergusson College Road, Poona City.

BOMBAY ART SOCIETY.—Founded 1888, to promote and encourage Art by exhibitions of Pictures and Applied Arts, and to assist in the establishment and maintenance of a permanent gallery for Pictures and other works of Art. Annual exhibition every February. Annual subscription Rs. 10; Life Member Rs. 100. *Secretary*, S. V. Bhandarkar, Bombay.

BOMBAY BRANCH OF THE CLASSICAL ASSOCIATION.—The Classical Association was started in 1903 in London, to promote the development and maintain the well-being of classical studies. The Bombay Branch was founded in 1910; it numbers over 100 members; holds

5 or 6 meetings a year; and publishes a yearly journal. Subscription Rs. 6 for ordinary and Rs. 2-8-0 for associate members.

Secretary, Mrs. Gray, 13, Marine Lines, Bombay.

BOMBAY BRANCH OF THE ROYAL ASIATIC SOCIETY.—Founded 1804, to investigate and encourage Oriental Arts, Sciences and Literature. Annual subscription Rs. 50. *Secretary*, The Rev. R. M. Gray, Town Hall, Bombay.

BOMBAY NATURAL HISTORY SOCIETY.—Founded 1883, to promote the study of Natural History in all its branches. The Society has a membership of about 1,700 and a small museum with a representative collection of the different vertebrates and invertebrates found in the Indian Empire and Ceylon. A Journal is published quarterly which contains articles on different natural history subjects as well as descriptions of new species and local lists of different orders. In the more recent numbers, serial articles on game birds, common snakes, and common butterflies have been appearing. Annual subscription Rs. 15. Entrance fee, Rs. 10. *Honorary Secretary*, W. S. Millard, *Curator*, N. B. Kinnear, Office and Museum, 6, Apollo Street, Bombay.

BRITISH AND FOREIGN BIBLE SOCIETY.—Since 1811 the British and Foreign Bible Society has been at work in this country. It has 6 Auxiliaries in India and an Agency in Burma. The first Auxiliary was established in Calcutta, in 1811, then followed the Bombay Auxiliary in 1813, the Madras Auxiliary in 1820, the North India Auxiliary in 1845, the Punjab Auxiliary in 1863, the Bangalore Auxiliary in 1875, while the Burma Agency was founded in 1899. The Bible or some portion of it is now to be had in nearly 100 different Indian languages and dialects and the circulation throughout India and Burma reached nearly 1½ million copies in 1918. The Bibles, Testaments, and Portions in the various Vernaculars are sold at rates which the very poorest can pay, and at considerable loss to the Society. Grants of English Scriptures are made to Students who pass the various University examinations, whose applications are countersigned by their Principals, as under:—

The 4 Gospels and the Book of Acts in 1 Vol. to Matriculates.

The New Testament and Psalms to Intermediates.

The Bible to Graduates.

Last year 8,559 volumes were so distributed. Portions of Scriptures in the important vernaculars have been prepared in raised type for the use of the Blind and large grants of money are annually given to the different Missions, to enable them to carry on Bible women's work and Colportage.

Besides the British and Foreign Bible Society, there is Bible work carried on in India, Assam and Burma in a much smaller way by the Bible Translation Society—which is connected with the Baptist Missionary Society—the American and Canadian Baptist Mission, the National Bible Society of Scotland, and the Tranquebar Tamil Bible Society,

The following table shows the growth in the British & Foreign Bible Society's work during the past few years in India & Burma :—

CIRCULATION OF THE B.F.B.S. IN INDIA.

Auxiliaries.	1918.	1917.	1916.	1915.	1914.
Calcutta	182,436	172,734	139,499	148,058	169,285
Bombay	230,499	202,407	189,594	184,937	181,452
Madras	290,650	275,802	275,264	233,420	263,805
Bangalore	Not to hand.	32,974	34,265	36,336	35,658
North India	213,460	226,546	189,564	172,172	210,754
Punjab	98,296	150,366	157,680	115,391	122,224
Burma	101,003	107,623	105,127	117,948	117,518
Total copies of Scriptures ..	1,116,344	1,168,452	1,090,993	1,008,262	1,100,696

These returns do not include the copies which any Auxiliary has supplied to London or to other Auxiliaries and agencies during the year.

BRITISH MEDICAL ASSOCIATION (Bombay Branch).—Founded 1886, to promote Medical and the Allied Sciences and the maintenance of the honour and interests of the Medical Profession. *Secretary*, Dr. D. R. Bardi, Bombay.

BOMBAY MEDICAL UNION.—Founded 1883 to promote friendly intercourse and exchange of views and experiences between its members and to maintain the interest and status of the medical profession in Bombay. The entrance fee for Resident members Rs. 5, monthly subscription Rs. 2. Absent members Re. 1, and non-resident members yearly subscription Rs. 5. *President*: Dr. F. N. Kapadia. *Secretaries*: Dr. R. D. Mody and Dr. A. K. Contractor. *Hon. Librarians*: Dr. K. P. Mody and Dr. V. G. Rele. *Treasurer*: Dr. M. P. Kerawala, 123, Esplanade Road, Bombay.

BOMBAY SANITARY ASSOCIATION.—Founded to create an educated public opinion with regard to sanitary matters in general; (b) to diffuse the knowledge of sanitation and hygiene generally, and of the prevention of the spread of disease amongst all classes of people by means of lectures, leaflets and practical demonstrations and, if possible, by holding classes and examinations; (c) to promote sanitary science by giving prizes, rewards or medals to those who may by diligent application add to our knowledge in sanitary science by original research or otherwise; (d) to arrange for homely talk or simple practical lectures for mothers and girls in the various localities and different

chawls, provided the people in such localities or chawls give facilities. The Sanitary Institute Building in Princess Street, which has lately been built by the Association, at a cost of nearly Rs. 1,00,000 the foundation stone of which was laid by Lady Willingdon in March, 1914, and opened in March, 1915, is a large and handsome structure with a large Lecture Hall, Library, Museum, etc., and also provides accommodation for King George V. Anti-Tuberculosis League Dispensary and Museum and the Office of the Deputy Health Officer C. Ward and the Vaccination Station. *Hon. Secretary*: Dr. James Cairns, Senior Assistant. Health Officer, Bombay.

EUROPEAN ASSOCIATION.—The European Association was established in 1883 under the title of the European and Anglo-Indian Defence Association and was re-established in 1912 under the title of the European Defence Association, but the present title was adopted in 1913. The Association has for its objects the general protection of European interests and the promotion of European welfare. The Association numbers 8,261. The Head Offices are at Dalhousie Square, Calcutta. *President*, Mr. G. Morgan.

BRANCHES OF THE EUROPEAN ASSOCIATION.

ASSAM VALLEY, DIBRUGARH.—*Chairman*, Mr. L. A. Roffey. *Hon. Secretary*, Mr. A. L. Allam.

BIHAR, MOZUFFERPORE.—*Chairman*, Mr. P. Kennedy. *Hon. Secretary*, Mr. J. M. Wilson.

LONGHYR (Sub-Branch).—*Chairman*, Mr. J. C. Aguilár; *Secretary*, C. H. C. Havelock.

BOMBAY.—*Chairman*, Mr. W. A. Haig-Brown. *Hon. Secretary*, Mr. H. F. Weston.

BURMA, RANGOON.—*Chairman*, Mr. J. W. Richardson. *Hon. Secretary*, R. Thompson Stoneham.

DARJEELING.—*Chairman*, Mr. E. A. Scarth. *Hon. Secretary*, Mr. Kenneth Mackenzie.

DELHI.—*Chairman*, Mr. H. H. Yule. *Hon. Secretary*, Mr. R. Macpherson.

DOOARS, JALPAIGURI.—*Chairman*, Mr. H. B. Bradant Smith. *Hon. Secretary*, Mr. J. A. Polewhale.

MADRAS.—*Chairman*, Mr. H. P. E. Rae. *Joint Hon. Secretaries*, Messrs. A. D. Charles and P. Holt.

PUNJAB, LAHORE.—*Chairman*, Mr. Owen Roberts. *Secretary*, Mr. L. E. Banfield.

RAJPUTANA, AJMER.—*Chairman*, Mr. W. S. Fraser. *Hon. Secretary*, Mr. L. N. Lloyd.

SIND, KARACHI.—*Chairman*, Mr. W. D. Young. *Hon. Secretary*, Mr. E. J. McNulty.

BURMA VALLEY, SILCHAR.—*Chairman*, Mr. A. F. Stewart. *Hon. Secretary*, Mr. J. C. Henderson.

UNITED PROVINCES, CAWNPORE.—*Chairman*, Mr. S. H. Taylor. *Hon. Secretary*, Mr. J. G. Ryan.

INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE (Calcutta).—*Secretary*, Dr. Amrita Lal Sircar, 210, Bow Bazar Street, Calcutta.

INDIAN LIBERAL CLUB.—Started on 30th March 1917, to promote a systematic study of politics in general and Indian politics in particular, to organise free and well informed discussions on current political topics as well as on abstract questions to provide facility for collecting information in questions arising, or necessary to be raised, in the Imperial and Provincial Legislative Councils and to form and maintain a library.

Office: Servants of India Society, Sandhurst Road. *President*, Sir Narayan Chandavarkar. *Secretaries*, Mr. J. R. Gharpure, B.A., LL.B., and Mr. C. S. Deole, B.A.

INDIAN ECONOMIC SOCIETY (BOMBAY).—Started in 1915, with the object of affording facilities for an accurate and scientific study of economics, for the formation and dissemination of current economic ideas and for collecting first hand information regarding the industry and commerce of the country with a view to the removal of difficulties in the way of their promotion and development. The Society arranges periodical discussions and publishes pamphlets and it holds weekly Marathi Class in Economics. The Society also publishes a quarterly Journal entitled "The Journal of the Indian Economic Society." Subscription, a minimum of Rs. 6 a year. *President*, Mr. J. A. B. Petit. *Secretaries*, Mr. C. S. Deole of the Servants of India Society, Mr. N. M. Muzumdar, Mr. Gulabchand Devchand, Mr. M. D. Altekar. *Office*—Servants of India Society's Home, Sandhurst Road, Girgaon, Bombay.

INDIAN MATHEMATICAL SOCIETY.—Founded in 1907 for the advancement of Mathematical studies in India. It conducts a bi-monthly journal in which papers on mathematical sub-

jects are published and maintains a library with current mathematical periodicals in all languages and new books on the subject. The library is located in the Fergusson College, Poona, whence the journals and books are circulated to members by post. The journal of the Society is published in Madras. There are about 150 members from all parts of India. *President*, Principal A. C. L. Wilkinson, M.A., Elphinstone College, Bombay. *Secretaries*, Prof. D. D. Kapadia, Poona, and Prof. M. T. Naranengar, Bangalore. *Librarian*, Principal R. P. Paranjpye, Poona.

INDIAN SOCIETY OF ORIENTAL ART (Calcutta).—*Joint Secs. and Treasrs.*, N. Blount and B. C. Law, P. O. Box No. 8, Calcutta.

INDIA SUNDAY SCHOOL UNION.—The India Sunday School Union is a large indigenous interdenominational Society having the sympathy and co-operation of the greater number of Missionary Societies in India. The chief objects of the Union are the promotion of systematic and careful Bible study, and the increased efficiency of Sunday Schools in India. Its operations extend beyond the borders of India itself to Mesopotamia, Siam and Borneo. Approximately 750,000 Sunday School scholars and teachers and 13,944 Sunday Schools are connected with the Union, speaking 45 Vernaculars. One Central and 60 Provincial and Mission Committees control its Indian work, which forms part of a world-wide movement with a membership of 35,000,000. Her Excellency Lady Chelmsford, C.I., G.B.E., is the Patroness.

The India Union was founded in Allahabad in 1876. Yearly examinations are held for both teachers and scholars in thousands of centres, for which medals, prizes, scripture awards, and certificates are granted to successful candidates. Upwards of 260,000 candidates have been examined in six months' Bible study since 1896, no less than 200,000 granted illuminated certificates and in 1917 nearly 50 medals were awarded. Notes on the daily portions of the Interdenominational Bible Reading Association are published by the I. S. S. U. in English and 14 Vernaculars, and 50 editions of the S. S. Lesson Expositions are published in 20 Vernaculars. In addition, there is a large publication of literature dealing with all phases of child study and moral and religious training. The monthly publication of the Union is the *India Sunday School Journal*. The Teachers Training Department is under the care of Mr. E. A. Annett supported by the W. S. S. A. *General Secretary of the Union*, the Rev. R. Burges, India Sunday School Union, Jubbulpore.

MADRAS FINE ARTS SOCIETY.—*Secretary*, Edgar Thurston, Central Museum, Madras.

MADRAS LITERARY SOCIETY AND AUXILIARY OF THE ROYAL ASIATIC SOCIETY.—*Secretary*, W. F. Grahame, I.C.S., College Road, Nungambaukum.

NATIONAL INDIAN ASSOCIATION.—Founded in 1870. Its objects are:—(a) To extend in England, knowledge of India, and interest in the people of that country. (b) To co-operate with all efforts made for advancing Education

and Social Reform in India. (c) To promote friendly intercourse between English people and the people of India. In all the proceedings of the Association the principle of non-interference in religion and avoidance of political controversy is strictly maintained. It has branches in Bombay, Madras, Ahmedabad, Nagpur, Calcutta, Rangpur, Poona & Lahore. *Hon. Secretary*, Miss Beck, 21 Cromwell Road, London. Publication, *The Indian Magazine and Review*, a monthly Journal which chronicles the doings of the Association in England and in India, and takes note of movements for educational and social progress. It publishes articles about the East to interest Western readers, and articles about the West to interest readers in the East.

LIFE MEMBERS.—Ten Guineas Annual Subscriptions; Members one Guinea; County Members, Ten Shillings; Associates (Students), Five Shillings.

PHILATELIC SOCIETY OF INDIA.—Annual subscription Rs. 15. *Secretary*, Jno. Godinho, 15 Burrow's Street, Bombay.

PHOTOGRAPHIC SOCIETY OF INDIA (Calcutta).—Annual subscription Rs. 24 (Town Members) and Rs. 10 (Mofussil members). Entrance fee Rs. 20 and Rs. 10. *Secretary*, A. E. Harris, 40, Chowringhee Road, Calcutta.

POONA SEVA SADAN.—This institution was started in 1909 by Mrs. Ramabai Ranade, Mr. G. K. Devadhar and a few other ladies and gentlemen in Poona. It is now working independently though for a part of the intervening period it was conducted as a branch of the Bombay Seva Sadan. Its main object is to make women self-reliant and to train them for missionary work undertaking educational and medical work for their sisters and brethren, especially in backward areas and working on a non-sectarian basis. The instruction is free except for the Music Classes. There are seven different departments sub-divided into 43 classes. Arrangements are made for training nurses and midwives at the Sassoon Hospital, Poona, and a Hostel is maintained for them and also for those attending the Sub-Assistant Surgeons' Class. There is a Training College with 86 students for training Mistresses for Vernacular schools. This college is probably the only college in India maintained by a non-official, non-Christian missionary body teaching the full course. The results of the Certificate examinations held last year under the authority of the local Government Training College for Women were as follows, III year, 9 students passed out of 12, II years 6 out of 13, and 1st year, 12 out of 22. The Practising School for little girls attached to the Training College has now 232 students reading up to the Marathi VI Standard. Primary Classes for grown up women teaching up to the Marathi Fifth Standard are attended by 115 women. It is here that poor women are recruited for the work of teacher, nurse or midwife. Special classes for teaching English, First Aid, and Home Nursing were attended by 84 students; the Music Classes by 77 students, and the Workroom Classes for teaching

Sewing, Embroidery, Hosiery and Weaving, by 105 students. Thus the total number of pupils is 730 to-day (including about 150 duplications). The Institution maintains a hostel with 42 inmates for the Training College and another with 25, for very poor women. In connection with the medical branch a Committee has recently been formed in England, with Lord Reay as President, which will enable the Society to send fully qualified Nurses there to undergo further training. Now Her Excellency Lady Lloyd is the Honorary Patroness along with Lady Willingdon and Lady Sydenham. The Institution is largely supported by public contributions and Government assistance. The annual expenditure roughly comes up now to Rs. 40,000 a year. *President*, Mrs. Ramabai Ranade; *Honorary General Secretary and Organiser*, Mr. Gopal Krishna Devadhar, M.A.; *Local Secretary and Treasurer*, Mrs. Yamunabai Bhat; *Lady Superintendent*, Mrs. Jankibai Bhat; *Secretary*, Nursing Committee, Rao Bahadur Dr. P. V. Shikhar, L.M. & S.

RANGOON LITERARY SOCIETY. *Secretary*, Mr. Hunter, 13, York Road.

ROYAL SOCIETY OF ARTS, INDIAN SECTION.—This Society was founded in London in 1754. Its recently published history by Sir Henry Trueman Wood, late Secretary of the Society, gives the following account of the Indian Section. In 1857, a proposition was made by Mr. Hyde Clarke, who wrote to the Council suggesting that "a special section be formed for India, another for Australia, one for English America and so on." It was suggested that the Indian Section should meet once a fortnight for the reading of papers. Nothing came of the suggestion until ten years later when Mr. Hyde Clarke returned to England, and in 1868 he renewed his proposal, but only proposing the formation of a committee which should organise conferences on Indian subjects. This time the suggestion was taken up more warmly. Mr. Hyde Clarke himself was placed on the Council, and the Indian Conferences, which soon developed into the Indian Section, were started. "The Indian Section thus established became a most important department of the Society. It has had great results in India by spreading information as to the directions which the development of Indian manufactures and Indian products could most usefully take, and in England by giving similar information as to the industrial resources and progress of India itself. The Section has received great help from the Indian press and it has in return been of service to the Indian press in supplying useful information to it. It has been of great value to the Society itself as the means by which many members have been added to its list, so that in fact, thanks to a very large extent to the work of the Indian Section and of the allied section for the Colonies, a large proportion of the present number of members come from the dependencies of the Empire abroad." *Secretary of the Society*, G. K. Menzies, M.A.; *Secretary of the Indian and Colonial Sections*, S. Digby, C.I.E., 18, John Street, Adelphi, London, W. C. 2.

SERVANTS OF INDIA SOCIETY.—The Servants of India Society which was founded by the late Hon'ble Mr. Gopal Krishna Gokhale, C.I.E., in 1905, has its Head-quarters in Poona and its objects are "to train national missionaries for the service of India and to promote by all constitutional means the true interests of the Indian people." Its government is vested in the First member or President and a Council. On the death of Mr. Gokhale in February, 1915, the Hon'ble Mr. V. S. Srinivasa Sastri was elected President. He has again been re-elected for a further term of three years. It has at present four branches, viz., (1) in Bombay, (2) in Madras, (3) in the United Provinces, (4) in Central Provinces. Each Branch consists of ordinary members, members under training and permanent assistants who work under the direction of a Senior Member. The branches engage both in propagandist and active work of political, educational, social, agricultural and philanthropic character in which they secure the help of a large number of voluntary workers both men and women. A fair idea of the work of a branch can be had from a brief description of the operations of the Bombay Branch whose members have so far undertaken activities in various fields. (1) Social purity like the *Holika Sammelan* of Bombay, (2) Social reform organization under the auspices of the National Social Conference, (3) rousing public opinion about elementary education, (4) promotion of the cause of elevation and education of Indian women by building up institutions like the *Seva Sadan*, Poona, (5) social service as carried out by the social service League of Bombay, (6) spread of co-operative movement among the agriculturists, compositors in the city of Poona and mill-hands in Bombay. The co-operative societies, as at Hadapsar in and other villages around Poona, started for the benefit of these poor people number over 35 with a total membership of over 1,800, capital of nearly one and half lakhs and a total turnover of three lakhs per year. Nineteen of these societies which are in Bombay for poor labouring classes are so conducted as to free their members entirely from their chronic indebtedness. Their membership consists of sweepers, scavengers, mill-hands numbering above 550 and debts amounting to nearly two lakhs of rupees have been cleared off. Moreover, educational work is organized by starting a Co-operative Secretaries Training Class in Bombay for 60 Secretaries from the various districts these three years. These two experiments on such a scale are the first of their kind in India, (7) relief work connected with wide-spread calamities by organizing the Plague Relief Committee of Poona, which succeeded in making inoculation popular in the Deccan, the *Salumbra Fire Relief Committee* which arranged for the relief to sufferers for five years and by undertaking a scheme of non-official relief during the famines of 1907-08 and 1914 in the United Provinces, the famine in Gujarat and Kathiawar of 1911-12 and the famine of 1913 in the district of Ahmednagar, and that of 1918-19 in Gujarat and the Deccan, (8) Influenza relief was well organised by mem-

bers of these associations in Bombay and Poona, (9) organising public opinion on the question of Indians in South Africa, (10) its political work is conducted strictly on constitutional lines and thus it was able to start District Congress Committees in several wards of the city of Bombay. These conducted a political quarterly, (11) it has started in Bombay an organisation called the Indian Economic Society with a view to promoting the study of Indian economics on right lines and also conducts a vernacular class, (12) A new association called the Liberal Club has been started to carry on political propaganda. Besides, the Society is now engaged in conducting a scheme of welfare work to supply cheap grain, cheap cloth and cheap credit at Jamshepur. Government help in this scheme. Quite recently the United Provinces Branch organised a band of volunteers who rendered assistance, in a manner that drew general approbation, to the pilgrims at the last Kumbha Mela in Hardwar and Allahabad, the ladies of the Poona Seva Sadan assisting in this work. The Society engages in journalistic work also, having in its control the *Uttarada* and English weekly in Nagpur, the *Dnyan Prakash*, a Marathi daily and weekly in Poona, and the *Hindustani*, an Urdu weekly in Lucknow. The Society has recently started an English Weekly called *The Servant of India*. The U. P. Branch has in addition undertaken the publication of pamphlets on public questions and has sent out three such publications together with a large quantity of leaflets.

The expenses incurred by the Central Home of the Society in Poona and its four branches exceed Rs. 45,000 a year and this amount is made up by contributions from Indians, rich as well as poor. The present number of workers enlisted by the Society is about 25, most of whom are University men of considerable standing. Besides there is a large number of devoted associates.

President.—The Hon'ble Mr. V. S. Srinivasa Sastri, B.A., L.T., Triplicane, Madras, Senior Member, Madras Branch. **Vice-President:** Mr. Gopal Krishna Devdhar, M.A., Senior Member, Bombay Branch. Mr. Natesh Appaji Dravid, M.A., Senior Member, Central Provinces Branch. Mr. Hirdayanath Kunzru, B.A., B. Sc., Senior Member, Upper India Branch. Mr. S. G. Vaze, B.A., Senior Member, Business Branch, Poona. Messrs. Joshi, Kunzru and Vaze together with the senior members constitute the Council of the Society with the Hon'ble Mr. Sastri as its President. Mr. Anant Vinayak Patwardhan is the Secretary of the Council and also of the Society.

SEVA SADAN.—The Seva Sadan Society was started on the 11th of July, 1908, by the late Mr. B. M. Malabari. It is the pioneer Indian ladies' society for training Indian sisters ministrant and serving (through them) the poor, the sick and the distressed. The society has a habitation in Gamdevi, Bombay. One-half of the Building and Endowment Fund of Rs. 82,000 has been spent mainly in building at Gamdevi, and partly in the purchase

of two acres of land at Santa Cruz for a "Sisters' Home" and other purposes.

The Society maintains the following institutions for training its probationers and for doing its other work. 1. A home for the Homeless. 2. An Industrial Home with various departments. 3. A Dispensary for Women and Children. 4. Ashrams. 5. Free educational classes and a Library and Reading-room. 6. Home-Classes in the quarters of the poor, and normal classes for training Marathi women for the teacher's profession. All these are for the benefit of poor women. *Secretary*, Miss B. A. Engineer, M.A., LL.B., *President*, Mrs. Ramabai Ranade, *Hon. Gen. Secretary*, the Hon. Mr. Lalubhai Samaldas, C.I.E., *Treasurers*, Sister Sushilabai and the Hon'ble Mr. Lalubhai Samaldas; *Trustees*, Sir Narayan Chandavarkar, Sir Bhalchandra Krishna, Sir V. D. Thackersey, the Hon. Mr. G. K. Parekh and the Hon. Mr. Lalubhai Samaldas, C.I.E.

CONSUMPTIVES' HOME SOCIETY.—This Society was started by the late Mr. B. M. Malabari on the 1st of June 1909. It was registered under Act XXI of 1860. It is an off-shoot of the Seva Sadan. Mr. Malabari secured a large grant of land in a Himalayan pine forest in Dharmpur (Simla Hills) from H. H. the Maharaja of Patiala, for a Sanatorium for Consumptives. The Sanatorium was started on June 1, 1909, and has been in existence ever since. Mr. Malabari collected an Endowment Fund of about Rs. 67,000 lodged with the Treasurer Charitable Endowments, under Act VI of 1890. Nearly Rs. 1,37,000 have been spent on buildings, etc., and the current annual expenditure is about Rs. 26,000. Dr. Nanavati, L. M. & S., and B.Sc., is in charge of the Sanatorium.

SOCIETY FOR THE PROMOTION OF NATIONAL EDUCATION.—This Society stands for an Indian education for Indian boys and girls, its general policy being embodied in "Principles of Education" by Mrs. Besant. *President*: Sir Rash Behari Ghose. *Treasurer*: Narottam Morarji Goculdas. *Registrar*: G. S. Arundale, Adyar, Madras.

SOCIETY FOR THE PROTECTION OF CHILDREN IN WESTERN INDIA.—*Office and Refuge*: Girgaon Back Road, Bombay.

Founded.—To prevent the public and private wrongs of children and the corruption of their morals; to take action for the enforcement of the laws for their protection, and, if necessary, to suggest new laws or amendments of the existing laws; to provide and maintain an organisation for these objects; and to do all other lawful things incidental or conducive to the attainment of the foregoing objects.

Subscription for annual membership, Rs. 10; for Life Membership, Rs. 100.

Honorary Secretaries: Mr. Mahomedbhoj Currimbhoj, Mr. N. V. Mandlik, B.A., LL.B., Mr. R. P. Masani, M.A.

WEST OF INDIA ANGLING ASSOCIATION.—The Association was started in 1912 at Poona, the headquarters were transferred to Bombay in 1915, and the membership has increased

considerably since then. The rights for stocking, preserving and angling in Lake Sydenham at Walwhan, near Lonavla, have been obtained by the Association from the Tata Hydro-Electric Power and Supply Co. and a commencement has been made with stocking the lake with sporting fish which as far as can be ascertained are doing well. Bottom fishing for indigenous fish is only allowed at present but it is hoped that the lake will be open this year for fly fishing and spinning. A journal is published which contains articles on fishing, experiences in the rivers and lakes and on the coasts of India, the sporting fishes of the country and notes of general interest to Indian anglers.

Entrance fee Rs. 15, Annual subscription Rs. 10. *Patron*, H. E. Lord Willingdon. *President*, E. Comber. *Hon. Secretary*: G. V. E. Wesche-Dart, Bombay Club, and *Hon. Treasurer*, G. B. Adamson, C/o Russo-Asiatic Bank, Bombay.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION OF INDIA, BURMA AND CEYLON.—This was started in India in an organized and National way in 1896. The aim of the Association is to meet the needs of the girls and women who live in India from an Intellectual, Spiritual, Social and Physical standpoint. This is done in many ways in the local Associations that now flourish under the auspices of the National Young Women's Christian Association. The Associations in the big cities have a large membership and include all classes of the community. Clubs, Classes, Lectures, Commercial Courses, Music, Languages, Bible and Mission Study, Social Intercourse, Physical Training, and all kinds of physical recreation are carried on as need arises in these City Associations. Boarding Homes are established in all the principal cities where teachers, nurses, business girls, students, apprentices, etc., can have a comfortable home with good wholesome food and congenial companionship for Rs. 30 per month. Travellers' Aid work is done and many travellers, especially in the port cities, find accommodation as they pass through. Employment is also found for women and girls. A useful feature of the Association is the Holiday Homes that are conducted in the hills, where girls from the plains can find inexpensive accommodation and regain health and strength. Some of the homes accommodate as many as forty-five at one time and hundreds benefit during the season. The work of the Association in the large cities is managed by a staff of Y. W. C. A. Secretaries, who are fully trained and equipped to meet the many demands that are made on them. These Secretaries are supplied from America, Britain, Australia, Canada and India.

Many of the Associations are in small up country stations where a handful of members constitute the Branch, led by some lady in the station who is glad of this opportunity for service. The members of these small stations may be transferred, in the ever-changing life of India, into the larger cities and then they learn in a fuller way what the Association can do to help them in all-round development. In addition to the work of the City Department described above, the student department (which

is affiliated to the World's Christian Student Federation) has branches in schools and colleges, while the Vernacular Department is carrying on valuable work in co-operation with Missionary societies in five different languages. The National Headquarters are in Calcutta. The inter-denominational character of the Association is clearly kept in the forefront and ladies of many Christian denominations are on the Committee. The National Committee consists of resident and non-resident members, representative of the City, Student and Vernacular Departments in various sections of the country.

Two newer developments of the work are the Research Section conducted by Mrs. Sinclair Stevenson, M.A., D.S.C. (author of "The Heart of Jainism"), and the provincial organization of branches into District Committees. The Patroness of the Association is H. E. Lady Chelmsford, who is also President of the Simla Branch.

Copies of the annual report can be obtained from the National Office which is now at 5, Russell Street, Calcutta.

The Official Organ of the Association is "Woman's Outlook in India," which has a circulation of over 1,500 copies monthly.

This supplies women living in India with a good review at the price of Rs. 2-0-0 post free a year.

YOUNG MEN'S CHRISTIAN ASSOCIATION.—This Association, which was founded by the late Sir George Williams on June 6, 1844, seeks to unite those young men who, regarding Jesus Christ as their God and Saviour according to the Holy Scriptures, desire to be His disciples, in their doctrine and in their life, and to associate their efforts for the extension of His kingdom among young men. The above is known as the "Paris Basis" and it is world-wide. It was adopted at the first World's Convention in Paris in 1855 and re-affirmed at the Jubilee World's Convention in Paris in 1905. The aim of the Association is through its religious, educational, and physical work to cater for the threefold—spiritual, mental and physical—needs of young men, and its policy is one of intense loyalty to the Church.

There are, as a rule, two classes of members. Any young man who is a member in full communion of any Protestant (including Anglican and Syrian) Christian church may be an active or voting member and any young man of good character may be an associate.

The Young Men's Christian Association though relatively new to India, is spreading rapidly. The local Associations are autonomous and governed by local Boards of Directors. These Associations in convention elect a National Council of European and Indian laymen, who are responsible for the supervision and expansion of all forms of the Association work. Both the National Council and the local Associations employ specially trained full time Secretaries. Over two-thirds of the Secretaries are supported from funds raised in India and Ceylon. The remaining Secretaries are supported by the Associations

of North America, Australasia, and Great Britain, but their work is directed by committees in India, to whom their services are loaned for the time-being. The first paid Secretary came to India over twenty-five years ago, in response to an appeal from Madras. Soon afterwards the National Council was organised, and has become increasingly an indigenous institution.

There are now approximately 250 Associations with 15,000 members. Of these about one quarter are Europeans and three quarters are Indians, of whom over half are non-Christians. The following Associations own one or more buildings which serve as the local headquarters:—Allahabad, 2; Bangalore, 3; Alleppey, 1; Bombay, 4; Calcutta, 5; Calicut, 1; Coimbatore, 1; Colombo, 1; Galle, 1; Hyderabad, 2; Jubbulpore, 2; Kandy, 1; Karachi, 1; Lahore, 1; Madras, 1; Mandalay, 1; Maymyo, 1; Nagpur 2; Naini Tal, 1; Rangoon, 3; Sunderabad, 1; Simla, 1.

In addition to buildings owned by the Association, bungalows have been rented to serve as headquarters in the following stations:—Ahmednagar, 1; Allahabad, 1; Bangalore, 2; Colombo, 2; Delhi, 1; Feroz-pore, 1; Hyderabad, 1; Jamalpur, 1; Jhansi, 1; Jubbulpore, 1; Lahore, 2; Lucknow, 1; Madras, 1; Madura, 1; Mhow, 1; Palamcottah, 1; Multan, 1; Poona, 1; Rangoon, 1; Trivandrum, 1.

The departments of the National Council are Student, Railway, Rural, Literary, Army High School, Architectural, Publication and Physical. The Student Christian Association, though an independent movement, is affiliated to the National Council and has branches in more than two score Colleges. The Railway Department is responsible for the development of work amongst railway employés. At Jamalpur the Railway Institute and Apprentices Engineers Club are operated by the Y. M. C. A. The Rural Department is organising village Y. M. C. A.'s and co-operative credit societies and promoting cottage industries. The Literary Department maintains two Secretaries:—J. N. Farquhar for Hinduism, K. J. Saunders for Buddhism. The object of the department is to promote a proper and sympathetic understanding of the non-Christian religions and show their relationship to Christianity. At the beginning of the war there were but three Army Associations and five Army Secretaries in the whole of India. Now Association privileges are provided for British and Indian Troops in twenty-nine cantonments under the direction of seventy Secretaries and Assistants. Eighty Secretaries are at work in Mesopotamia, ten serve the Indian Expeditionary Force in Europe and Egypt and 19 in British East Africa. In addition to organising school boys' Y. M. C. A.'s the High School Department arranges for holiday camps for boys and High School teachers. The National Council employs its own architects who plan and construct its buildings, hostels, and playgrounds. The Physical Department specialises on physical education and is promoting the playground movement. A Nation-

al Training School is established at Bangalore for the training of Indian Secretaries.

The "Association Press" is the Publication Department. A monthly magazine, the **YOUNG MEN OF INDIA**, is issued, and many books and pamphlets, both on Association subjects and on those of more general interest. Some of the latter, *e.g.*, the *Heritage of India Series*, have been issued in conjunction with the Oxford Press.

The Headquarters of the National Council is 5, Russell Street, Calcutta. The officers are :—

Patron:—His Excellency Lord Chelmsford, Viceroy and Governor-General of India.

Chairman:—Raja Sir Harnam Singh, K.C.I.E.

Chairman of Executive:—Sir Francis H. Stewart, Kt., C.I.E.

Treasurer:—W. R. Gourlay, Esq., C.I.E., I.C.S., 8, Government Place, Calcutta.

General Secretaries.—E. C. Carter, K. T. Paul, F. V. Slack.

The Bombay Association now possesses four well-equipped buildings:—Wodehouse Road, Lamington Road, Rebsch Street, and Reynolds Road. The President is the Hon'ble Mr. G. Carmichael, C.S.I., I.C.S., and the General Secretary is Mr. I. R. Lines. In connection with each building there is a well managed hostel, one for Anglo-Indian apprentices, one for Indian students, one primarily for European business men, and one for Indians. The Elton Hockey Tournament and the Condon Tennis Tournament are held annually under the auspices of the Bombay Association.

ASSOCIATION OF UNIVERSITY WOMEN IN INDIA.

The Association of University Women in India was established in 1913. Its objects are :—

(1) To facilitate intercommunication and co-operation between women belonging to the universities of the United Kingdom, resident in India.

(2) To provide a means of keeping in touch with the universities of the United Kingdom, by communication with the Federation of University Women, and otherwise as may seem expedient.

(3) To act as an organisation which shall afford opportunity for the expression of united opinion and for concerted action by university women on matters especially affecting them.

Membership is open only to those women who hold degrees in any university in the United Kingdom, or hold Oxford or Cambridge Honours Certificates. But as it was soon felt that a Society to include the many graduate women in India who have graduated elsewhere than in the United Kingdom, was desirable and could do useful work, a kindred association, to include Indian and colonial graduates, promptly sprang into existence in Bombay. This association is confined to Bombay Presidency and is known as the **Bombay Presidency Women Graduates' Union**.

Joint Secretaries.—Miss Schaeffer, Y. W. C. A., Bombay, and Miss Rustonjee, 162, Hornby Road.

The Association of University Women has four branches. The addresses of the Honorary Secretaries are as follows:—

Calcutta	.. Miss Kell, Diocesan College.
Bombay	.. Mrs. Houston, 41, Marine Lines
Allahabad	.. Mrs. Daniels, 11, Muir Road.
Delhi, Simla	.. Mrs. Molesworth, Penrose Hall, Simla.

The Delhi Branch only came into existence in 1918. The United Provinces Branch is somewhat scattered. The Calcutta and Bombay Branches are influential, and have repeatedly intervened with good effect to educate public opinion with regard to subjects affecting women. They

have, for instance, made investigations on behalf of the Education Department, Government of India, the Calcutta University Commission, etc. They have been the means of introducing women on to University Senates and Municipalities. The Calcutta Branch carried through an important exhibition of Food Products with the double object of discovering:—

(1) What were the exact resources of the country.

(2) How firms and individuals could be induced to develop these resources, to find substitutes for imported goods and to improve existing methods of preparation of indigenous food products.

The most valuable part of the work of the Association has been the establishment of **Women's Employment Bureaux** in Calcutta and Bombay. The work of mobilising women has been difficult in every country, not for want of good will on women's part but for want of machinery and organisation. The Association of University Women realised that, as the only body of educated Englishwomen in this country, it was called upon to provide the necessary organisation. Bureaux were formed and were the means of (1) helping many employers to get into touch with the available reserve of women labour; (2) showing trained women where their services were most needed and (3) training inexperienced workers who had nothing but their good will to offer. The Bureaux have been remarkably successful. In its last month's working, the Bombay Bureau was able to place as many as 40 per cent. of its fresh applicants, but in June 1918, it closed down as the National Service Bureau, a department of the War Purposes Board, Government of Bombay, was opened in order to mobilise more successfully the man-power of the Presidency.

As a means of promoting friendships between women from various parts of the United Kingdom, with widely differing tastes and interests and spheres of life in India, and as an instrument for affording opportunities for usefulness to educated women, the Association of University Women has a useful function to perform.

CONTROL OF COTTON CLOTH.

The circumstances which led to the passing of the Cloth Control Act were described in the last issue of the Indian Year Book. The Act became law on September 26th, 1918, and Mr. F. Noyce, I.C.S., who had previously been engaged in preliminary investigations, was immediately appointed Controller of Cotton Cloth under its provisions, with the assistance of an Advisory Committee of twelve members, of whom eight were mill-owners or mill agents from Bombay, Ahmedabad, Cawnpore and Madras. A fall in the price of cloth which, in August 1918, had reached the unprecedented height of Rs. 2-14-0 per pound in Bombay, had commenced when the intentions of Government in regard to Cloth Control were made public and had been accentuated by the announcement that a tax would be levied on excess profits, by a heavy fall in the price of raw cotton, by the prospects of peace and also by the diminished purchasing power of the people resulting from the influenza epidemic and the unfavourable agricultural conditions. The lowest price so far recorded since the passing of the Cloth Control Act was reached a few days after the signing of the Armistice on November 11th. The provisions of the Act were not, therefore, put formally into operation until the middle of January when the price of cloth had again reached Rs. 1-14-0 per pound. It had, however, been decided that the cloth to be standardized for the majority of the Provinces should be one of 20s. warp and 20s. weft, 32 reed and 32 picks. It is explained in the report recently issued by the Controller of Cotton Cloth that, as the cloth was intended for the poorest classes only, the reed and pick adopted for it were low and the cloth was consequently less closely woven and more open in appearance than the bulk of the cloth ordinarily manufactured by the mills. In order to meet the case of mills in Cawnpore and elsewhere which were only able to weave cloth of coarser counts and to provide a thicker cloth to suit the requirements of the Punjab and the adjacent provinces, it was also decided to provide a coarser cloth of 16s. warp and 14s. weft, 44 reed and 44 picks.

Standard Cloth.—Before the Act was brought into operation, 1,117 bales of standard and other cloth were supplied, mainly to Bihar and Orissa and the United Provinces. Two orders for standard cloth were placed with the mills, one at the end of January and one at the beginning of March. The output of 5 per cent. of the looms in each mill was taken up in both cases. In all, 9,651 bales of cloth were manufactured by 129 mills, 5,053 bales under the first order and 4,598 bales under the second order. This total is exclusive of 628 bales which were rejected. The price fixed for cloth of the first order was Rs. 1-7-6 per pound for shirting, Rs. 1-8-0 per pound for lhoties and Rs. 1-8-6 per pound for saris. That for cloth of the second order was two annas a pound less in all cases. Only shirting of the thicker quality was supplied and the prices fixed for this for the cloth of the two orders were Rs. 1-5-6 and Rs. 1-3-6 respectively. The "reasonable margin of profit" to the

millowners contemplated by the Act was placed at ten per cent.

Prices Fall.—Owing to the fall in the price of raw cotton and also the presence of standard cloth on the market, the price of ordinary cloth fell steadily from the commencement of the year until the end of April and the margin between the price of the latter and that of standard cloth practically vanished. In these circumstances, it was decided in the middle of April to place no further orders with the mills. The demand for the thicker cloth which had sprung up from the Punjab and the adjacent provinces was met as far as possible by obtaining standard and other cloth at favourable rates on a voluntary basis and 940 bales were obtained in this way for those Provinces and for Bengal, for which province a stock of cloth was required in order to prevent a possibility of profiteering during the Puja holidays. In all 11,708 bales of standard and other cloth were supplied, of which 4,274 bales were taken by the United Provinces, 3,905 bales by Bihar and Orissa, 2,079 bales by the Punjab, 461 bales by Bengal, 417 bales by Assam, 340 bales by the Central Provinces, 112 bales by Bombay, 61 bales by Baluchistan, 57 bales by the North-West Frontier Province, and one bale each by Delhi and Madras. This represented nearly 22½ million yards of cloth and the total amount paid for it to the mills amounted to Rs. 63,13,555. In spite of considerable fluctuations, the margin between the price of ordinary cloth and that at which it would have been possible to manufacture standard cloth continued from April onwards insufficient to justify the placing of fresh orders with the mills and the cloth operations were therefore closed down at the end of November 1919. The Cloth Control Act, however, remains in operation.

Agencies.—The agencies utilized for the sale of the cloth varied in the different Provinces. In the United Provinces, the cloth was disposed of at the outset by regular dealers in cloth who were selected in each district by the District officers. Their remuneration was fixed at 3½ per cent. for wholesale dealers and five per cent. for retail dealers. The dealers proved unequal to the work and the cloth was eventually taken over by District Boards and was also sold by Gazetted officers and Tahsildars with satisfactory results. Agents and retailers appointed on commission sale were also employed at the commencement in Behar and Orissa where also they proved a failure. A special agency working under the Provincial Controller was therefore substituted for them and effected an immediate improvement in sales which have since been satisfactory. In the Punjab, practically the whole of the cloth was disposed of very rapidly by co-operative societies. In the remaining provinces which took smaller quantities, the cloth was sold in the main by Government Officers, Municipalities or Local Boards.

The report shows that the indirect effects of the presence of standard cloth in stabilizing prices and in preventing any tendency to profiteer were great and beneficial.

PRINCIPAL CLUBS IN INDIA.

Name of Club.	Estab-lished	Club-house.	Subscription.			Secretary.
			Ent.	An-nual	Mon-thly.	
ABBOTTABAD .. ..	..	Abbottabad, N. W. F. Provinces.	Rs. ..	Rs. ..	Rs. ..	....
ADYAR	1890	Madras	75	12	5	J. W. T. Terrance.
AGRA	1863	Agra Cantonment ..	50	..	10	Major F.G. Kunhardt.
AHMEDNAGAR.. ..	1889	....	32	..	11	C. W. A. Turner, I.C.S.
AIJAL	1893	Lushai Hills, E. B. and Assam.	32	..	20	Capt. G. B. Davies
AJMERE	1883	Kaiser Bagh	75	..	15	R. D. Harrison.
AKOLA	1870	Berar	100	144	12	L. E. Dowling.
ALLAHABAD	1868	Aliahabad	100	10	12	Geo. H. Bailey.
AMRAOTI .. ..	..	....	100	12	13	W. A. Forbes.
AMRITSAR	1894	Amritsar	20	..	7	A. C. Mullen.
BANGALORE UNITED SERVICE.	1868	38, Residency Road ..	..	..	..	....
BAREILLY	1883	Municipal Gardens ..	32	..	9	J. H. Alderson.
BARISAL	1864	Backergunj, Barisal ..	32	..	13	G. W. Leeson.
BARRACKPUR	1850	Grant Trunk Road, S. River Side.	48	..	10	L.G. Notley and C. B. Bayley, C.V.O.
BASSEIN	1881	Fytche Street, 50, Bas-sein, Burma.	50	..	11	W. Spearman.
BELGAUM	1884	Close to Race Course..	50	..	10	Lt.-Col. A. W. F. King.
BENARES .. ..	..	....	20	14	14	Capt. E. G. Durant.
BENGAL	1827	33, Chowringhee Road, Calcutta.	300	25	16	Col. W. Weallens.
BENGAL UNITED SER-VICE.	1845	29, Chowringhee Rd...	..	..	..	....
BOMBAY	1862	Esplanade Road. ..	100	12	8	W. F. Murdoch.
BOMBAY GYMKHANA ..	..	....	50	12	5	M. Innes Ker.
BYCULLA	1833	Bellasis Rd., Bombay.	200	12	10	R. T. H. Mackenzie.
CALCUTTA	1907	13, Russell Street ..	10	120	10	D. Lindsay, C.B.E., and N. Gupta, C.I.E.
CAWNPORE	1844	Cawnpore	50	..	10	Major H. C. Buckley, I.M.S.
CHAMBA	1891	Dalhousie, Punjab ..	75	12	9	R. C. Cumberlege
CHITTAGONG	1878	Pioneer Hill, Chitta-gong.	..	..	..	....
CLUB OF CENTRAL INDIA.	1885	Mhow	50	..	9	Major W. S. Barroll.
CLUB OF WESTERN INDIA.	1865	Elphinstone Road . Poona.	200	12	6	....
COCHIN	1876	....	50	18	7-8	W. T. Anderson.
COCONADA	1856	Coconada	70	12	10	R. Hunter.
COIMBATORE	1868	Coimbatore	50	18	10	H. Waddington.
COONOOR	1894	Coonoor, Nilgiris ..	100	12	7	J. Mackinnon Gould-ing.
DACCA	1864	Dacca	50	..	20	W. Bersley.

Name of Club.	Estab-lished.	Club-house.	Subscription.			Secretary.
			Ent.	An-nual	Mon-thly.	
			Rs.	Rs.	Rs.	
DARJEELING	1868	Auckland Road ..	70	12	6	F. M. Timmo.
DELHI	1898	Ludlow Castle, Delhi.	120	..	10	A. W. H. Grant.
HIMALAYA	1841	Mussoorie .. ..	..	..	..
JHANSI	1887	Next to Public Gar- dens, Jhansi.	50	..	8	Capt. A. J. Mahoney.
MADRAS	1831	Mount Road, Madras.	250	20	10	Capt. W. B. F. David- son.
MADRAS COSMOPO- LITAN.	1873	Mount Road	100	15	4	Rao Saheb M. C. T. Muthiah Chettiar.
MALABAR	1864	Beach Road, Calicut..	50	12	10	W. L. Bruce.
MAYMYO	1901	....	100	12	10	E. A. C. Walker, I.S.O.
MOOLTAN	1892	Mooltan	30	..	10	T. B. Decks.
NAINI TAL	1864	.....	..	..	..
OOTACAMUND	1840	Ootacamund, Nilgiri Hills.	150	12	5	S. E. Langmore.
ORIENT .. ..	..	Chaupatty, Bombay..	150	72	6	C. N. Wadia, C.I.E., Lt. Col. Barnardo, I.M.S.
PEGU	1871	Prome Rd.; Rangoon.	150	12	12	Francis H. Tod.
PESHAWAR	1883	Peshawar	32	..	10	Capt. B. G. Holt.
PUNJAB	1879	Upper Mall, Lahore ..	150	15	12	A. R. Ross Redding.
QUETTA	1879	Quetta	80	..	12	Major B. Leicester.
RANGOON GYMKHANA.	1874	Halpin Rd., Rangoon.	75	6	7	W. B. Clover.
RANGOON BOAT CLUB..	..	Royal Lakes, Rangoon	48	..	3	R. R. Yeomans.
RAJPUTANA	1880	Mount Abu	10	..	11	H. G. Richardson.
ROYAL BOMBAY YACHT.	1880	Apollo Bunder .. ..	..	..	..	G. C. Pinston.
ROYAL CALCUTTA TURF.	1861	49, Theatre Road ..	150	25	..	Arthur Fawcett.
ROYAL WESTERN INDIA GOLF CLUB.	..	Nasik	50	15	9	....
SATURDAY .. ..	..	7, Wood St.; Calcutta.	75	..	7	J. A. Tassie
SECUNDERABAD	1883	Secunderabad, Deccan	100	..	8	Lt. H. S. Harrison.
SHILLONG	1873	Northbrook Road, Shillong.	50	12	20	C. H. Holder.
SIALKOT .. ..	..	Sialkot, Punjab ..	32	..	7	Lt. P. R. Stevenson.
SIND	1871	Karachi	200	12	9	E. Miller.
TRICHINOPOLY	1869	Cantonment	50	..	12	A. L. M. Moodie.
TUTICORIN	1885	Tuticorin .. ..	..	..	..
UNITED SERVICE CLUB	1866	Simla	200	12	10	Lt.-Col. H. M. Alex- ander, D.S.O.
UNITED SERVICE CLUB, LUCKNOW.	1861	Chutter Manzil Palace.	50	..	8	Major E. W. Oliver.
UPPER BURMA	1889	Fort Dufferin, Manda- lay.	50	12	10	....
WESTERN INDIA TURF.	..	Bombay and Poona ..	50	20	..	Major J. E. Hughes.
WILLINGDON SPORTS ..	1917	Clerk Road, Bombay..	300	120	..	J. Bull.
WHEELER	1863	The Mall, Meerut ..	50	..	10	Major L. Reed.

The Church.

In the ordinary acceptance of the term there is no established Church in India. An Ecclesiastical Establishment is maintained for providing religious ministrations, primarily, to British troops, secondarily to the European civil officials of Government and their families. Seven out of the eleven **Anglican Bishops** in India are officers of the Establishment, though their episcopal jurisdiction far transcends the limits of the Ecclesiastical Establishment. The stipends of the three Presidency Bishops are paid entirely by Government, and they hold an official status which is clearly defined. The Bishops of Lahore, Lucknow, Nagpur and Rangoon draw from Government the stipends of Senior Chaplains only but their episcopal rank and territorial titles are officially recognised. The Bishops of Chota Nagpur, Tinnevely-Madura, Travancore-Cochin, Dornakal and Assam are not on the establishment. The new Bishopric of Assam was created in 1915. In its relations with Government it is subordinate to the see of Calcutta. But the maintenance of the Bishopric is met entirely from voluntary funds.

The ecclesiastical establishment includes four denominations—Anglican, Scottish, Roman and Wesleyan. Of these, the first two enjoy a distinctive position, in that the Chaplains of those denominations (and in the case of the first-named the Bishops) are individually appointed by the Secretary of State and rank as gazetted officers of Government. Throughout the Indian Empire there are 134 Anglican and 18 Church of Scotland chaplains whose appointments have been confirmed. The Roman Catholic and Wesleyans receive block-grants from Government for the provision of clergy to minister to troops and others belonging to their respective denominations. The Wesleyan Methodist Church has a staff of military chaplains in India who receive a fixed salary from Government and 25 chaplains working on a capitation basis of payment by Government. Churches of all four denominations may be built, furnished and repaired, wholly or partly at Government expense.

In the Anglican Communion a movement towards **Synodical Government** was making great progress, when, in the course of the year 1914, serious legal difficulties were encountered. The Bishops were advised that their relations with Canterbury and the Crown precluded the establishment of synods on the basis adopted by the Anglican Church in America, Japan, South Africa and other countries where it is not established by the State. It is stated that in course of time those relations may be modified so as to admit of the establishment of synodical government in India. Meanwhile Diocesan Councils are being adopted as a make-shift measure. These Councils possess synodical characteristics, but are devoid of any coercive power.

So far as the European and Anglo-Indian communities are concerned the activities of the Church are not confined to public worship and pastoral functions. The **education** of the children of those communities is very largely in the hands of the Christian denominations. There are a few institutions such as the La

Martiniere Schools, on a non-denominational basis; but they are exceptional. In all the large centres there exist schools of various grades as well as orphanages, for the education of Europeans and Anglo-Indians under the control of various Christian bodies. The Roman Catholic Church is honourably distinguished by much activity and financial generosity in this respect. Her schools are to be found throughout the length and breadth of the Indian Empire; and they maintain a high standard of efficiency. The Anglican Church comes next, and the American Methodists have established some excellent schools in the larger hill-stations. The Presbyterians are also well-represented in this field, particularly by the admirable institution for destitute children at Kalimpong, near Darjeeling. Schools of all denominations receive liberal grants-in-aid from Government, and are regularly inspected by the Education Departments of the various provinces. Thanks to the free operation of the denominational principle and its frank recognition by Government, there is no "religious difficulty" in the schools of the European and Anglo-Indian communities.

Christian Missions.

The tradition that St. Thomas, the Apostle was the first Christian missionary in India is by no means improbable. History, however, carries us no further back than the sixth century, when a community of Christians is known to have existed in Malabar. Since then the so-called **Syrian Church** in south-west India has had a continuous life. Except in its infancy this Church (or rather these Churches, for the Syrian Christians are now divided into four communions) has displayed little of the missionary spirit until quite recent times. Western Christianity was first introduced into India by the Portuguese, who established their hierarchy throughout their sphere of influence, Goa being the metropolitan see of the Indies. St. Francis Xavier, a Spaniard by race, took full advantage of the Portuguese power in Western India to carry on his Christian propaganda. His almost super-human zeal was rewarded with much success, but many of the fruits of his labour were lost with the shrinkage of the Portuguese Empire. It is really to the work of the missionaries of the **Propaganda** in the 17th century that the Papacy owes its large and powerful following in India to-day. The Roman Catholics in India number 1,904,006, of whom 379,251 were added during the decade 1901-1911. The total of "Syrian" Christians (exclusive of those who while using the Syrian liturgy, are of the Roman obedience) is 315,612, as against 248,741 in 1901. Protestant Christians (the term throughout this article includes Anglicans) number 1,636,731, an increase of 486,986 since 1901. Thus, the total number of Christians of all denominations in India is now close on four millions. In fact it probably exceeds that figure at the present moment, as these statistics are taken from the Census Report of 1911, and the rate of increase during the previous decade was nearly 100,000 per annum.

The Protestant Churches made no serious attempt to evangelise India till the beginning of the nineteenth century. They have thus been at work in the Indian mission field for something over 100 years, and the statistical results of their efforts are given above. It is now, however, generally recognised that Christian missions are producing indirect effects in India which lend themselves only incompletely to any sort of tabulation. The main agency of this more diffusive influence of Christianity is the missionary school and college. The Protestant missions fill a considerable part in the elementary education of the country. According to the *Year Book of Missions in India*, 1912, they are teaching 446,000 children in 13,204 elementary schools, mostly situated in villages. This represents one-ninth of the total of elementary schools and scholars throughout the Empire. The majority of children in these schools are non-Christians. The same is true also of the high schools and in a still greater degree of the colleges. The former number 283 with 62,600 male and 8,400 female pupils. There are 38 colleges affiliated to Universities, containing 5,488 male and 61 female students. Of these as many as 5,241 are non-Christians. From the standpoint of missionary policy much importance is attached to these agencies for the indirect propagation of the Christian faith. The statesman and the publicist are chiefly interested in the excellent moral effect produced by these institutions amongst the educated classes, and the higher educational ideals maintained by their staffs. The principal University colleges under Protestant auspices are the Madras Christian College; the Duff College, Calcutta; the Wilson College, Bombay; and the Foreman College, Lahore. All these are maintained by Presbyterian societies, either British or American. The Roman Catholics have a large number of educational institutions, ranging from small village schools to great colleges preparing students for University degrees. But the proportion of Christian students in their institutions is very much larger than in those of the Protestant bodies. The proportion of literates amongst native Roman Catholics is probably lower than amongst the Protestant converts; but compared with Hindus and Mahomedans it is conspicuously higher. The Roman Catholics have some 3,000 elementary schools in which 98,000 boys and 41,000 girls are receiving instruction. In middle and high schools they have 143,000 boys and 73,000 girls and in University colleges about 5,000 students of both sexes. These figures, however, include a large proportion of Europeans and Eurasians, who are an almost negligible quantity in Protestant mission schools and colleges.

More recent, but producing even more widespread results, is the **Philanthropic work** of Christian missions. Before the great famine of 1878, missionaries confined themselves almost exclusively to evangelistic and educational activity. The famine threw crowds of destitute people and orphan children upon their hands. Orphanages and industrial schools became an urgent necessity. But the philanthropic spirit is never satisfied with one kind of organisation or method. A great

stimulus was also given to medical missions. **Hospitals and dispensaries** have sprung up in all parts of the mission field; and leper asylums are almost a monopoly of Christian missionary effort. In 1911 the total number of medical missionaries working under Protestant societies in India was 118 men and 217 women, the majority of the former being also ordained ministers of religion. There are 184 industrial institutions in which 59 different arts and crafts are taught, ranging from agriculture to type-writing. In this department the **Salvation Army** hold a prominent place; and the confidence of Government in their methods has been shown by their being officially entrusted with the difficult work of winning over certain criminal tribes to a life of industry. The indirect effect of all this philanthropic activity under missionary auspices has been most marked. It has awakened the social conscience of the non-Christian public, and such movements as "The Servants of India" and the mission to the Depressed Classes are merely the outward and visible sign of a great stirring of the philanthropic spirit far beyond the sphere of Christian missionary operations.

Anglican Missionary Societies.

The Church Missionary Society carries on work in India in seven different missions—the United Provinces, South India, Travancore and Cochin, Bengal, Western India, Punjab and Sind and the Central Provinces and Rajputana. The names are in order of seniority. Work was begun in what are now called the United Provinces in 1813, in Bombay in 1820, in the Punjab in 1851, and in the Central Provinces in 1854. The Society has always kept Evangelistic work well to the fore; but it also has important medical missions, especially on the N.-W. Frontier, and many schools of the Primary, Middle and High standards. The Church of England Zenana Missionary Society is an offshoot of the C. M. S. controlling the work of 162 missionary ladies. The number of ordained European missionaries of the C. M. S. in India and Ceylon is 160, European laymen 30 and European laywomen 258. The Society claims a Christian community of 2,21,359 of whom 63,655 are adult communicants.

Society for the propagation of the Gospel. Statistics of the work of this Society are not easily ascertained, as much of it is done through Diocesan institutions, which, while financed and in many cases manned by the S. P. G., are entirely controlled by the Diocesan authorities. The best known of the S. P. G. missions is that at Delhi, commonly called the Cambridge Mission to Delhi, carrying on educational work at St. Stephen's College and School. At the College there are about 200 students under instruction, and at the High School 800. The College hostels accommodate 100 students. Missions to the depressed classes exist in Burma, in the Ahmednagar District and in several parts of South India, especially in the Diocese of Tinnevely-Madura. There are 1,16,000 Indian Christians under the aegis of the S. P. G.; 90 ordained European missionaries and 98 European lady workers.

Other Anglican Societies.—The Oxford Mission to Calcutta was started in 1880

It works in the poorest parts of Calcutta and also at Barisal. There are 11 missionaries of this Society, and 16 Sisters. In addition to its work amongst the poor, the Oxford Mission addresses itself to the educated classes in Bengal and issues a periodical called *Epiphany*, which is known all over India.

The Society of St. John the Evangelist (commonly known as the Cowley Fathers) has houses at Bombay and Poona, and small stations in the Bombay Konkan. In Bombay its missionary work centres round the Church of Holy Cross, Umakhadi, where there is a school and a dispensary. The Christians are chiefly drawn from the very poorest classes of the Bombay

population. At Poona the Society co-operates with the Wantage Sisters and in Bombay with the All-Saints Sisters. Other Anglican sisterhoods represented in India are the Clewer Sisters at Calcutta and the Sisters of the Church (Kilburn) at Madras. The St. Hilda's Deaconesses' Association of Lahore carries on important educational work (chiefly amongst the domiciled community) in the Punjab. The mission of the Scottish Episcopal Church at Nagpur, the Dublin University Mission at Hazaribagh, and the Mission of the Church of England in Canada working at Kangra and Palampur (Punjab) should also be mentioned under the head of Anglican Missions.

Bengal Ecclesiastical Department.

Westcott, The Right Reverend Foss, D.D. Lord Bishop of Calcutta and Metropolitan of India.

SENIOR CHAPLAINS.

Stokoe, Rev. Cecil George, M.A.	St. Paul's Cathedral, Calcutta.
Firminger, Ven'ble Walter Kelly, M.A., B.D. ..	Archdeacon of Calcutta (On leave).
Stuart, Canon Robert William Hall, B.A. ..	(On leave.)
Smith, Canon Joseph Frank, B.A., A.K.C. ..	(On leave.)
Keeling, Rev. Ernest William Phillips, B.A. ..	Services placed at the disposal of the Punjab Administration.
Drawbridge, Rev. W. H., M.A.	Services placed at the disposal of Government of Assam.
Parker, Rev. William Almair Hedley	Services placed at the disposal of the Government of Punjab.
Crozier, Rev. Philip Horsefall	Fort William.
Penley, Rev. Horace Octavius, M.A.	On Combined leave.
Ridsdale, Rev. Arthur Cyril	(On leave.)
Godber, Rev. John	Domestic Chaplain to the Lord Bishop of Calcutta and Chaplain of Darjeeling.

And 11 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Thomson, Rev. William, M.A.	Presidency Senior Chaplain. Senior Chaplain, St. Andrew's Church, Calcutta.
Ingram, Rev. James William, B.D.	Second Chaplain, St. Andrew's Church, Calcutta.

CHAPLAINS OF THE CHURCH OF ROME.

Meuleman, The Most Reverend Dr. Brice, S.J. ..	Archbishop, Calcutta.
Carbery, Rev. Fr. Philip, S.J.	Chaplain, Alipore Central Jail.

Bombay Ecclesiastical Department.

Palmer, Right Reverend Edwin James, M.A. ..	Lord Bishop of Bombay.
Barham, Rev. C. M., M.A. (on leave for 3 months from December).	Archdeacon of Bombay and Bishop's Commissary (On Furlough).
Smith, Arthur Kirke	Registrar of the Diocese.
Hatchell, Ven., C.F.W.	Chaplain of Byculla.
Coles, Rev. A. H.	} Honorary Canons of Bombay Cathedral.
Heywood, Rev. R. S.	
Joshi, Rev. D. L.	
King, Rev. C.	
Rivington, Rev. C. S.	

SENIOR CHAPLAINS.

Footte, Rev. Harold	Dharwar.
D'Alessio, Rev. Edward Samuel John, P.A. ..	Ahmedabad.
Mould, Rev. Horace	Colaba.
Kennelly, Rev. W. J. M.	St. Paul's, Poona.
Tibbs, Rev. Philip Gordon, B.A.	Kirkee.
Arnould, Rev. Henry Lloyd M.H.	St. Mary's, Poona.
Hill, Rev. Edward Eustace	Garrison Chaplain, Bombay

And 14 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF SCOTLAND.

Matthew, Rev. John Crombie, M.A., B.D. ..	Senior Presidency Chaplain.
---	-----------------------------

And 3 Senior Chaplains and 2 Junior Chaplains.

CHAPLAINS OF THE CHURCH OF ROME.

Gyr, The Very Rev. A.	Presidency.
-----------------------------	-------------

Madras Ecclesiastical Department.

Whitehead, Right Reverend Henry, D.D.	..	..	..	Lord Bishop of Madras.
Cox, Ven'ble Lionel Edgar, M.A.	..	..	..	Archdeacon and Bishop's Commissary.
Rowlandson, Frederic, B.A., LL.B.	..	..	..	Registrar of the Diocese and Secretary to the Lord Bishop.

SENIOR CHAPLAINS.

Flynn, Rev. Hugh Hamilton	..	..	..	Secunderabad.
Bull, Rev. Edmund	..	..	..	(On leave.)
Giles, Rev. Clement Douglas, M.A.	..	..	..	(On leave.)
Heycock, Rev. Francis Wheaton, M.A.	..	..	..	Vellore.
Nuttall, Rev. Frank	..	..	..	Ootacamund.
Creak, Rev. Elrick Havelock	..	..	..	Cocoanada.
Morton, Rev. Bertram Mitford	..	..	..	Junior Joint Chaplain, St. Georges'.
Stone, Rev. Henry Cecil Brough	..	..	..	Services placed at the disposal of the Government of India, Army Department.
Lowsley, Rev. W. Ashbel	..	..	..	Coimbatore.
Jervis, Rev. E. O.	..	..	..	St. Mark's Church, Bangalore.
Piers, Rev. S. O.	..	..	..	Bellary.
Bridge, Rev. Henry Noel	..	..	..	Fort St. George.
Proctor, Rev. Francis Owen	..	..	..	St. Thomas' Mount with Pallavaram.
Wright, Rev. G. A. Arthur	..	..	..	Domestic Chaplain to the Bishop.
Sell, Rev. Charles Edward	..	..	..	Calicut and Cananore.
Smith, Rev. George C. Augustus	..	..	..	Wellington.

And 14 Junior Chaplains.

CHURCH OF SCOTLAND.

Gillan, Rev. David Hedley, M.A., B.D.	..	..	..	St. Andrew's Church, Madras.
Phillip, Rev. James Gibson	..	..	..	St. Andrew's Church, Bangalore.
Mitchell, Rev. James Donald, M.A., B.D.	..	..	..	Senior Chaplain, St. Andrew's Church, Secunderabad
Mackenzie, Rev. Donald Francis	..	..	..	Probationary.

Assam Ecclesiastical Department.

Drawbridge, Rev. W. H.	..	..	..	Shillong.
Wilcox, Rev. F. B., B.A.	..	..	..	Darrang.
Cosserat, Rev. N. W. P., B.A.	..	..	..	Lakhimpur.
Dickinson, Rev. C. W.	..	..	..	Silchar.

Bihar and Orissa Ecclesiastical Department.

JUNIOR CHAPLAINS.

Tambling, Rev. F. G. H.	..	..	..	Dinapore.
Newton, Rev. R.P., M.A.	..	..	..	Cuttack (Temporary).
Hewison, John Henry	..	..	..	Bhagalpur.
Green, Canon Arthur Daniel	..	..	..	Monghyr and Jamalpur.
Simmons, William John, B.A.	..	..	..	Muzaffarpur and Darbhanga.
Gee, Rev. Richard, M.A.	..	..	..	Ranchi.
Lewis, Rev. Hugh Mitchell	..	..	..	Bankipore.

Burma Ecclesiastical Department.

Fyffe, The Right Reverend Rolleston Sterritt, M.A.	Lord Bishop of Rangoon.
--	----	----	----	-------------------------

SENIOR CHAPLAINS.

Seeley, Rev. George Henry	..	..	..	Maymyo.
Ellaby, Rev. George Alfred, B.A.	..	..	..	Rangoon Cantonment.
Price, Rev. Howel Evans	..	..	..	Cathedral Chaplain, Rangoon

And 5 Junior Chaplains.

Central Provinces Ecclesiastical Department.

Chatterton, Right Reverend E., D.D.	..	..	..	Lord Bishop of Nagpur. On deputation to Mesopotamia.
Martin, Ven'ble F. W.	..	..	..	Archdeacon, and Bishop's Commissary Pachmarhi.

SENIOR CHAPLAINS.

Price, Rev. C., M.A.	..	..	..	On leave.
Anstey, Rev. H. C. S.	..	..	..	On leave.
Clarke, Rev. W. L.	..	..	..	Kamptee.
Molony, Rev. P. J.	..	..	..	Ranikhet.
Clough, Rev. E. E.	..	..	..	Garrison Chaplain, Jubbulpore.
Wardell, Rev. A. F. G.	..	..	..	Garrison Chaplain, Jubbulpore.

And 9 Junior Chaplains.

North-West Frontier Ecclesiastical Department.**SENIOR CHAPLAINS.**

Muspratt, Rev. W., M.A.	..	..	..	Risalpur.
Cole, Rev. A. B. F.	..	..	..	Abbottabad.
Rintoul, Rev. C. R., M.A.	..	..	..	On leave.
Campbell, Rev. R. W.	..	..	..	On leave.
Carden, Rev. H. C.	..	..	..	Peshawar.

And 2 Junior Chaplains.

Punjab Ecclesiastical Department.

Curran, Right Reverend H. B., M.A., D.D.	..	..	..	Lord Bishop of Punjab, Lahore.
Wheeler, The Ven'ble Cauffon High Trevor, M.A.	..	..	..	Archdeacon.

SENIOR CHAPLAINS.

Brookes, Rev. Joshua Alfred Rowland, M.A.	..	..	..	On leave.
Stanley, Rev. Albert Edward, M.A.	..	..	..	On leave.
Muspratt, Rev. Walter, M.A.	..	..	..	Risalpur.
Stewart, Rev. Charles, B.A.	..	..	..	Murree Gallis
Hickox, Rev. Sydney Ernest	..	..	..	Sukker. Serving under Government of Bombay.
Foster, Rev. Kenric George	..	..	..	Dalhousie.
Cole, Rev. A. B. Farquharson	..	..	..	Abbottabad.
Markby, Rev. F. E.	..	..	..	On leave.
Thomas, Rev. E. S.	..	..	..	On leave.
Fagan, Rev. High William Farquharson	..	..	..	Dalhousie.
King, Rev. John Blakeney	..	..	..	On leave.
Buckwell, Rev. F. C.	..	..	..	Delhi.
Castle, Rev. W. W.	..	..	..	Murree.
Stephenson, Rev. H. S.	..	..	..	Bishop's Chaplain, Lahore.
Rintoul, Rev. Charles Randolph	..	..	..	On leave.
Selwyn, Rev. Arthur Lewis Henry	..	..	..	On field service.
Campbell, Rev. Rowland William	..	..	..	On leave.
Maunsell, Rev. A. P. Gabbett	..	..	..	Dagshai.
Williams, Rev. James Ernest Harris	..	..	..	Rawalpindi.
Proby, Rev. Randolph Simon Bennertz	..	..	..	Quetta.
Henry, Rev. W. E. Charles	..	..	..	On leave.

And 19 Junior Chaplains.

United Provinces Ecclesiastical Department.

Westcott, The Right Reverend George Herbert	..	..	..	Lord Bishop of Lucknow.
Chapman, The Ven'ble Percy Hugh, M.A., LL.D.	..	..	..	Archdeacon of Lucknow.
Pearson, H. G., Bar-at-Law	..	..	..	Registrar of the Diocese of Lucknow. (On leave.)
Langford James, J. W.	..	..	..	Officiating Registrar of the Diocese of Lucknow.

SENIOR CHAPLAINS.

Canney, Rev. Duncan Arnold	..	..	..	On leave.
Menzies, Rev. Henry, M.A.	..	..	..	Landaur.
Ninis, Rev. Richard Duncan	..	..	..	Chanbattia.
Smith, Rev. H. T. P.	..	..	..	On Combined leave.
Bell, Rev. William Lachlan, M.A.	..	..	..	Benares.
Kitching, Rev. W. L. W.	..	..	..	Chakrata.
Molony, Rev. Percival John	..	..	..	Ranikhet.
Irwin, Rev. Benjamin Christopher	..	..	..	Bultee, M.A. Meerut.

And 15 Junior Chaplains with 6 Additional Clergy

CHURCH OF SCOTLAND.

Two Junior Chaplains.

THE ROMAN CATHOLIC CHURCH.

With regard to numbers, the *Catholic Directory of India*, 1913, gives the following discrepant tables:—

						Civil Census, 1911.	Ecclesiastical Estimate.
British India	{	Latin rite	..	..	..	1,430,582	1,535,820
		Syriac rite	..	..	..	413,142	364,660
Total, British India and Prot. States						1,843,724	1,900,480
Burma	..	..	..	..	..	60,282	88,447
Ceylon	..	..	..	..	..	339,300	322,163
Total, India, Burma and Ceylon						2,243,306	2,311,090
French India	..	..	..	..	..	....	25,918
Portuguese India	..	..	..	..	..	....	296,148
Ecclesiastical Grand Total						..	2,663,156*

* After trying to rectify discrepancies the *Directory* fixes as probable the following numbers:—
 European and Anglo-Indian Catholics 114,512
 Baptised Indian Catholics 2,423,286
 Total .. 2,537,798

The Catholic community as thus existing is composed of the following elements:—

- (1) The "Syrian" Christians of the Malabar Coast, traditionally said to have been converted by the Apostle St. Thomas. They were brought under allegiance to the Pope by the Portuguese in 1599, and placed first under Jesuit bishops and then under Carmelite Vicars Apostolic. They are at present ruled by four Vicars Apostolic of their own Syriac rite.
- (2) Converts of the Portuguese missionaries from 1500 and onwards, starting from Goa and working in the south of the peninsula and up the west coast, Ceylon, Bengal, etc.
- (3) European immigrants at all times, including British troops.
- (4) Modern converts from Hinduism and Animism in recent mission centres.

The Portuguese mission enterprise starting after 1500, continued for about 200 years, after which it began to decline. To meet this decline fresh missionaries were sent out by the Congregation *de propaganda fide*, till by the middle of the 19th century the whole country was divided out among them except such portions as were occupied by the Goa clergy. Hence arose a conflict of jurisdiction in many parts between the Portuguese clergy of the "padroado" or royal patronage, and the propaganda clergy. This conflict was set at rest by the Concordat of 1886. At the same time the whole country was placed under a regular hierarchy, which after subsequent adjustments now stands as follows:—

Of the Portuguese Jurisdiction:—

The archbishopric of Goa (having some extension into British territory) with suffra-

gan bishoprics at Cochin; Mylapore and Damaun (all three covering British territory).

Of the Propaganda Jurisdiction:—

The archbishopric of Agra with suffragan bishoprics of Allahabad and Rajputana and the Prefecture Apostolic of Bettiah.

The archbishopric of Bombay, with suffragan bishoprics of Poona, Mangalore and Trichinopoly.

The archbishopric of Calcutta, with suffragan bishoprics of Dacca and Krishnagar, and the Prefecture Apostolic of Assam.

The archbishopric of Madras, with suffragan bishoprics of Hyderabad, Vizagapatam and Nagpur.

The archbishopric of Pondicherry (French) with suffragan bishoprics of Mysore, Coimbatore and Kumbakonam.

The archbishopric of Simla with suffragan bishopric of Lahore and the Prefecture Apostolic of Kashmere.

The archbishopric of Colombo (Ceylon) with suffragan bishoprics at Kandy, Galle, Jaffna and Trincomalee.

The archbishopric of Verapoly, with suffragan bishopric of Quilon.

Four Vicariates Apostolic of the Syriac rite for the Syrian Christians of Malabar.

Three Vicariates Apostolic of Burma.

The European clergy engaged in India almost all belong to religious orders, congregations or mission seminaries, and with a few exceptions are either French, Belgian, Dutch; Swiss, Spanish or Italian by nationality. They

number about 1,000 besides which there is a body of secular clergy mostly native to the country, numbering about 2,000 and probably about 2,000 nuns. The first work of the clergy is parochial ministrations to existing Christians, including railway people and British troops. Second comes education, which is not confined to their own people; their schools being frequented by large numbers of Hindus, Mahomedans, Parsis, etc. Among the most important institutions are St. Xavier's College, Calcutta, St. Peter's College, Agra, St. Xavier's College, Bombay, St. Joseph's College, Trichinopoly, St. Aloysius College, Mangalore, teaching university courses; besides a large number of high schools and elementary schools. The education of girls is supplied for by numerous convent schools worked by religious congregations of nuns to say nothing of orphanages and other charitable institutions. The total number under education amounted in 1904 to 143,051 boys and 73,164 girls, later figures being unavailable. As to missionary work proper, the country is covered with numerous mission centres,

among which those in Chota Nagpur, Gujerati Orissa, the Nizam's Dominions, the Ahmednagar district and the Telugu coasts may be mentioned. (Full particulars on all points will be found in the Catholic Directory already quoted.) The mission work is limited solely by shortage of men and money, which if forthcoming would give the means to an indefinite extension. The resources of the clergy after the ordinary church collections and pay of a few military and railway chaplaincies are derived mainly from Europe, that is, from the collections of the *Society for the Propagation of the Faith* and of the *Holy Childhood*, helped out by private or other donations secured from home by the different local missionaries. In mission work the fathers count as enrolled only those who are baptised and persevering as Christians, and no baptism, except for infants or at point of death, is administered except after careful instruction and probation. This, while keeping down the record, has the advantage of guaranteeing solid results.

THE SCOTTISH CHURCHES.

The Church of Scotland.—The Chaplaincy work of the Church of Scotland dates from 1814, when the Rev. Dr. Bryce landed in Calcutta; and organised a congregation of his Scottish fellow countrymen. Since 1903 there have been eighteen chaplains on the staff, of whom nine belong to the Bengal Presidency, five to Bombay, and four to Madras. These minister both to the Scottish troops and to the civil population of the towns where they are stationed, but when there is a Scottish regiment the chaplain is attached to the regiment, instead of being posted to the station where the regiment happens to be placed and as a rule moves with the regiment. There are three Presidency senior Chaplains in charge of Bengal, Bombay, and Madras respectively. There are churches in the chief towns of the Presidencies, and churches have also been built, or are being built, in all considerable military stations, *e.g.*, Chakrata, Lucknow, Peshawar, Ranikhet, Rawalpindi, Sialkot and Umballa. In addition to the regular establishment there are a number of acting Chaplains sent out by the Colonial Committee of the Church of Scotland, and these are serving in such stations as Rawalpindi, Cawnpore, Meerut, Mhow, and Quetta. The Additional Clergy Societies in India contribute towards the cost of this additional establishment. In other places such as Sialkot, Murree, Dalhousie, Darjeeling and Lahore, regular services are provided by Scottish Missionaries. Simla has a minister of its own sent out from Scotland.

The Mission work of the Church of Scotland dates from 1829, when Alexander Duff, one of the greatest of modern missionaries, was sent to Calcutta. He was the first to open schools where English was made the medium for instruction, and where religious teaching was given daily. Similar educational missions were soon afterwards started in Bombay and Madras. Educational work is still an important branch of the mission work of the Church, but the Bombay College was closed in 1891,

and in 1907 the College in Calcutta was united with the College of the United Free Church of Scotland, to form the "Calcutta Christian College." In the Punjab Evangelistic work is being carried on from eight centres under seventeen missionaries. The baptised Christian community now numbers almost 13,000. Work commenced in Darjeeling in 1870 is now carried on throughout the whole Eastern Himalayan district, and there is a Christian community there of over six thousand. In the five mission districts of Calcutta, the Eastern Himalayas, Madras, Poona, and the Punjab there were at the end of 1915 over 21,000 baptised Indian Christians. In connection with these missions the Women's Association of Foreign Missions does invaluable service in school, medical and zenana work, having in India 48 European missionaries, 145 teachers, over 50 schools, three hospitals and six dispensaries.

The Church of Scotland has also done much to provide education for European children in India. Together with the United Free Church St. Andrew's Church provides the governing body of the Bombay Scottish High Schools, which have always held a high place among such institutions, and exercises pastoral supervision over the Bombay Scottish Orphanage. In Bangalore there is the St. Andrew's High School, and both in Bangalore and in Madras the local congregation supports a school for poor children. The now well-known St. Andrew's Colonial Homes at Kalimpong, Bengal, though not directly part of the work of the Church of Scotland, were initiated by and are being locally managed by Missionaries of that Church. The homes exist for the benefit of the domiciled European Community, and are doing magnificent work. There are now fifteen cottages, and 437 children in residence. Further information may be found in "Reports of the Schemes of the Church of Scotland," Blackwood & Sons; "The

Church of Scotland Year Book" and "The Handbook of the Church of Scotland in India and Ceylon."

The United Free Church of Scotland.—This branch of the Scottish Church has only three purely European congregations in India, two in Calcutta, Wellesley Square, and Howrah and one in Bombay, Waudby Road. In Calcutta the Howrah Church is in the district of the mills, and every effort is made to minister to the Scottish Engineers and other workers in the mills. As noted above members of these congregations co-operate with the Established Church of Scotland in providing education for European children.

The Mission work of the Church is extended and varied. It is carried on in seven centres—in Bengal; in Santalia, with five stations; in Western India, including Bombay, Bombay District and Poona; in Hyderabad State including Jalna and Bethel; in Madras, with four stations; in the Central Provinces, including Nagpur, Nagpur District, Bhandara, Wardha and Amraoti; and in Rajputana where since 1860 missions have been established in eleven districts.

There are at work in these centres 212 Scotch missionaries, together with a native staff of 311. Of organised Indian congregations there are 41, comprising 4,813 communicant members, and representing a Christian community of 13,749. Of schools there are 336 with 815 teachers and 14,494 scholars. A large part of this work is organised and supported by the women of the Church who have sent out as many as 81 of these missionaries. In connection with the medical work of the mission there are 19 hospitals where in the year 480,090 out-patients and 8,435 in-patients are treated, all of whom are brought under Christian instruction. There are four great missionary Colleges. There is the Madras Christian College, with 839 students which reached its great success under the wise leadership of the Rev. Dr. William Miller, and which is now contributed to by five other Missionary Societies as well as that of the United Free Church. Representatives of these Missions, which include the C. M. S. and the Wesleyan Missionary Society, sit upon the College Board. There is the Scottish Churches College in Calcutta, with over 1,152 students, the Hislop College at Nagpur with 505 students, and the Wilson College in Bombay with 1,047 students.

BAPTIST SOCIETIES.

THE BAPTIST MISSIONARY SOCIETY OF GREAT BRITAIN.—Formed in 1792, largely through the efforts of Dr. Wm. Carey, operates mainly in Bengal, Bihar, the United Provinces, the Punjab, and Ceylon. The Baptist Zenana Mission has recently been united with this Society. The staff of the united Mission numbers 255 missionaries and about 1,000 Indian workers. Connected with the Society are 228 Indian Churches, 285 Day Schools, 19 Middle and High Schools, and 6 Theological Training Colleges. The Church membership at the close of 1918 stood at 14,697 and the Christian Community at 39,146. In the methods of the Society, the chief place is given to Bazaar and Village preaching. Increase in membership during the past ten years, about 60 per cent. and in the community 50 per cent. for the same period. Amongst the non-caste people great progress has been made in recent years, and Churches formed from amongst these peoples are self-supporting.

Special work amongst students is carried on in Calcutta, Dacca, Bankipore, Cuttack and Delhi, where Hostels have been erected for the prosecution of this form of work.

EDUCATIONAL WORK.—Ranges from Primary School to Colleges. Serampore College, the only College in India able to bestow a theological degree granted under Royal Charter by His Danish Majesty in 1827, and confirmed by the British Government in the Treaty of purchase of the Settlement of Serampore in 1845, and placed in 1856 by the College Council at the disposal of the Baptist Missionary Society to become a part of its Missionary Educational operations, Arts and

Theological. It was affiliated in 1857 to the newly-formed Calcutta University; reorganised in 1910 on the lines of its original foundation with the appointment of a qualified Theological Staff on an Interdenominational basis for the granting of Theological Degrees to qualified students of all Churches.

As the only College in India granting a Theological Degree a large number of students are now resident in the splendid College Buildings. In Arts, the College prepares for the Calcutta Arts Examinations. *Principal*: Rev. G. Howells, M.A., B.D., B.LITT., PH. D.

A Vernacular Theological Institute, and High School likewise attaches to Serampore, as also at Delhi and Cuttack, for the training of native preachers.

There are 9 or 10 purely English Baptist Churches connected with the Society, but English services are carried on in many of the stations where an European population obtains. Medical work connected with the Society reported 5 Hospitals, 8 Dispensaries, and about 39,000 out-patients for the year 1918. Two large Printing Presses for both English and Vernacular work are conducted at Calcutta and Cuttack. The Officiating Secretary of the Mission is the Rev. T. W. Norledge, 48, Ripon Street, Calcutta.

WOMEN'S MISSIONARY ASSOCIATION, B.M.S.—Extends over the same area practically as the above. The Indian General Secretary of the Women's Missionary Association of the Baptist Missionary Society is Miss Angus, 44, Lower Circular Road, Calcutta. .

THE CANADIAN BAPTIST MISSION.—Was commenced in 1873, and is located in the Eastern Telugu District to the north of Madras, in the Kistna, Godavari, Vizagapatam, and Ganjam Districts. There are 22 stations and 180 out-stations with a staff of 88 missionaries, including 7 qualified physicians, and 725 Indian workers, with Gospel preaching in villages. Organised Churches number 74, communicants 11,031 and adherents 20,409 for the past year. Thirteen Churches are entirely self-supporting. In the Educational department are 279 village Day schools, with 9,580 children, 11 Boarding schools, 2 High schools, a Normal Training school, a Theological Seminary providing in all for 700 pupils, and an Industrial school. There are 6 Hospitals and two leper asylums. The Mission publishes a Telugu newspaper. Village Evangelisation is the Central feature of the Mission, and stress is laid upon the work amongst women and children in particular. During the last decade membership has increased by 52 per cent., the Christian Community by 50 per cent., and scholars by 500 per cent. The Indian Secretary is the Rev. A. A. Scott, Tunj, Godavari District.

THE AMERICAN BAPTIST TELUGU MISSION.—Was commenced in the year 1836, and covers large parts of Nellore, Guntur, Kistna, and Kurnool Districts, and parts of the Deccan. Its main work is evangelism, but there is large Educational and Medical work in addition. There is an English Church in Madras. A large industrial Yerukala settlement is carried on at Kavali under the charge of one of the missionaries. Organized Telugu Churches, number 176, with 72,178 baptised communicants. There has been a net increase of 1,000 per annum for the past twenty years. There are 108 Missionaries and 2,051 Indian Workers. There is a large Theological Seminary at Ramapatnam for the training of Indian preachers and a Bible School at Vinukonda for training Bible Women. In ordinary educational work 848 primary schools, 26 Boarding Schools, 4 High Schools, 3 Training Schools and 1 Theological Seminary give training to 24,362. In Medical work 6 Hospitals report 2,187 in-patients and 19,583 out-patients for the year.

Secretary: A. M. Boggs, Narasavupet, Guntur District.

AMERICAN BAPTIST FOREIGN MISSION SOCIETY, organized in 1814, has Missions in Burma begun 1814; Assam 1836; Bengal and Orissa 1836; South India 1840. It owes its rise to the celebrated Adoniram Judson. Until 1910 the Society was known as the American Baptist Missionary Union. There are 31 main stations in Burma, 13 in Assam, 10 in Bengal and Orissa, 29 in South India, besides hundreds of out-stations. All forms of missionary enterprise come within the scope of the Society.

The missionary staff numbers 401 in all, with an Indian workers' staff of 4,834. Communicants number 164,801. Organized churches number 1,359 of which 860 are self-supporting. Educational work is conducted on a large scale, the total number of schools of all grades being 1,952 with over 65,000 pupils. The Christian College has 74 students in college classes. There are ten High Schools with 3,562 pupils.

Medical work embraces 13 Hospitals and 35 Dispensaries, in which 78,020 out-patients and 1,832 in-patients were treated last year.

Indian Christians contribute annually more than Rs. 1,40,000 for religious and benevolent work within the Mission.

The great work of the Mission continues to be evangelistic and the training of the native preachers and Bible-women, and extends to many races and languages, the most important of which, in Burma, has been the practical transformation of the Karens, whose language has been reduced to writing by the Mission. The work in Assam embraces 9 different languages, and large efforts are made amongst the employers on the tea plantations. The Mission Press at Rangoon is the largest and finest in Burma.

Assam Secretary, F. W. Harding, Tura, Assam.

Burma Secretary, Rev. H. J. Marshall, Tharrawaddy, Burma.

Bengal and Orissa Secretary, Rev. Harold I. Frost, Balasore, Orissa.

South India (or Telugu) Secretary, Rev. A. H. Curtis, Bapatla, Guntur District.

THE TASMANIAN BAPTIST MISSION.—With 3 missionaries, is established at Siragunge, E. Bengal.

Secretary: Rev. E. T. Thompson, Mission House, Siragunge.

THE AUSTRALIAN BOARD OF BAPTIST FOREIGN MISSIONS.—Embracing the societies representing the Baptists of the States of the Australian Commonwealth. The field of operations is in East Bengal. The staff numbers 38 Australian workers. There are 1,484 communicants and a Christian community of 3,362.

Secretary Field Council: Rev. Hedley Sutton, M.A., Mission House, Mymensingh.

THE STRICT BAPTIST MISSION.—Has 11 Missionaries, and 95 Indian Workers in Madras, W. and the Salem District. Communicants number 200; organised Churches 4; Elementary schools 32, with 1,500 pupils.

Secretary: Rev. E. A. Booth, Kilpauk, Madras, W.

AMERICAN BAPTIST, BENGAL-ORISSA MISSION commenced in 1836. Area of operation, Midnapore and Balasore districts of Lower Bengal. Mission staff 32, Indian workers 264. One English Church and 24 Vernacular Churches, Christian Community 5,000. One hospital and two dispensaries. Educational: One Theological and one High School, and 150 Elementary schools, pupils 4,880. Two Industrial schools for weaving and carpentering, &c. The Vernacular Press of this mission printed the first literature in the Santali language.

Secretary: Rev. Harold I. Frost, Balasore, Orissa.

PRESBYTERIAN SOCIETIES.

THE IRISH PRESBYTERIAN CHURCH MISSION.—Operates in Gujerat and Kathiawar with a staff of 30 Missionaries of whom 2 are qualified doctors and an Indian staff of 479 including school teachers. There are 10 Organised Churches, a communicant roll of 1,626, and a Christian community of 6,342. In Medical work there are 3 Hospitals, 5 Dispensaries, with 738 in-patients and 15,426 out-patients. The Mission conducts 3 High schools, 1 Anglo-Vernacular school, and 128 vernacular schools affording tuition for 6,507 pupils, 4 Orphanages, a Divinity College at Ahmedabad, a Teachers' Training College for men, a Teachers' Training College for women, both at Ahmedabad, and a Mission Press at Surat. The Mission has made a speciality of farm colonies, of which there are about a score in connection with it, most of them thriving.

The Jungle Tribes Mission with 4 missionaries is a branch of the activities of the above, working in the Panch Mahals and Rewa Kantha districts, with farm colonies attached.

Secretary: Rev. H. Martin, B.A., Mission House, Anand.

THE UNITED PRESBYTERIAN CHURCH OF NORTH AMERICA. The Sialkot Mission of the above Church was opened at Sialkot, Punjab, in 1855. It is now carrying on work in eight districts of the province. Its missionaries number 73, and its Indian workers 767. Its educational work comprises one Theological Seminary, one College, five High Schools, one Industrial School, eight Middle Schools, and 193 Primary Schools. The total enrolment in all schools was 13,575 in 1918. The Mission is also carrying on Medical work through four hospitals and eight dispensaries. The total Christian Community in connection with the Mission is 59,098.

Secretary: Rev. J. A. McConnelee, D. D., Gujranwala, Punjab.

THE AMERICAN PRESBYTERIAN MISSION operates in 3 main sections known as the Punjab, North India and Western India Missions. The American Staff numbers 209 and Indian Staff 1,347. There are 31 main stations and 132 out-stations. Organized churches number 64, 20 of which are self-supporting. There are 10,758 communicants and a total baptized community of 74,672. Educational work as follows: 3 Christian Colleges, and an interest in two other Colleges for women; students 1,288; Theological Schools 2, students 45; Training Schools for village workers 2, High Schools 14, pupils 1,017, Industrial Schools 6, pupils about 150; Agricultural Demonstration Farms 4, students about 130; Teachers' Training Departments 8, students about 100; Medical students at Miraj 56, Elementary Schools 223; Schools of all grades 268; pupils 12,911. Medical Work: Hospitals 6; Dispensaries 13. Sunday Schools 335 with 12,132 pupils. Contributions for Church and Evangelistic work on the part of the Indian Church Rs. 29,361.

The Hospital at Miraj, under the care of Dr. W. J. Wanless and Dr. C. E. Vail is well known throughout the whole of S. W. India, and the Forman Christian College at Lahore under the principalship of Rev. E. D. Lucas, D.D., is equally well-known and valued in the Punjab. The Ewing Christian College (Dr. C. A. R. Janvier, Principal) is growing rapidly and its agricultural department has become increasingly prominent. Woodstock College for Women at Mussoorie, Principal Rev. E. E. Fife, D. D., is one of the largest and most valuable institutions of this description in Northern India.

Secretary of Council of A.P. Missions in India: Rev. J. C. R. Ewing, D. D., LL. D., Litt. D., C.I.E., Lahore.

Secretary, Punjab Mission: Rev. F. J. Newton, Moga.

Secretary, North India Mission: Rev. R. C. Smith, Fatehpur, Haswa.

Secretary, Western India Mission: Rev. H. K. Wright, B.A., Vengurla.

THE NEW ZEALAND PRESBYTERIAN MISSION.—Commenced as recently as 1910 at Jagadhri, Punjab.

Secretary: Miss A. E. Henderson, Jagadhri.

THE CANADIAN PRESBYTERIAN MISSION.—Commenced in 1877, has 14 main Stations in the Indore, Gwalior, Rutlam, Dhar, Alirajpur, Jaora, Sitamau, Banswara, &c. Native States—The Mission staff numbers 75, Indian workers 288, Organized Churches 13, Communicants (September 30, 1918) 1,160, Baptised non-communicants 2,494, Unbaptised infants and catechumens 193. Total Christian Community 3,859; Educational work comprises Elementary and Middle Schools, High Schools for boys and girls, College, Theological Seminary and Classes. Industrial teaching and work are done in three Girls' Orphanages, in the Women's Industrial Home, and at Rasalpura which last includes the Mission Press and the School for the Blind. The Medical work is large, chiefly among women.

Secretary: Rev. J. Fraser Campbell, D.D., Rutlam C. I.

THE WELSH CALVINISTIC METHODIST MISSION (OR WELSH PRESBYTERIAN MISSION) established in 1840 with a staff of 32 Missionaries, 600 Native workers, occupies stations in Assam in the Khassia and Jaintia Hills, the Lushai Hills and at Sylhet and Cachar. The Khassia language has been reduced to writing, the Bible translated, and many books published in that language by the Mission. Communicants number 14,000, the total Christian community 42,000; organised Churches 450; self-supporting Churches 30. Elementary schools number 510, scholars 15,000; Boarding schools 3, scholars 820, in addition to 1 Industrial school, 4 Training institutions and 1 Theological Seminary. Two Hospitals and 3 Dispensaries provided for 10,000 patients in 1914.

Secretary: Rev. J. Ceredig Evans, Shillong.

THE ARCOT MISSION of the Reformed Church in America (Dutch), organised in 1853 occupies the Arcot and Chittoor districts in S. India with a staff of 29 Missionaries, and 504 Indian ministers and workers. Churches number 19, Communicants 3,936, total Christian community 11,298; Boarding schools 11, scholars 528; Theological school 1, students

37; High schools 4, scholars 1,219; Training schools 2, students 44; Industrial schools 2, pupils 95; Elementary schools 181, scholars 6,945. Three Hospitals, 7 Dispensaries with staff of 38, provided for 2,217 in-patients and 82,052 out-patients for the past year.

Secretary: Rev. H. J. Scudder, M.A., & B.D. Punganur, S. India.

CONGREGATIONAL SOCIETIES.

THE AMERICAN BOARD OF COMMISSIONERS FOR FOREIGN MISSIONS.—Has two large Missions, the American Marathi Mission, and the Madura Mission. The Marathi Mission includes a large part of the Bombay Presidency, with centres at Bombay, Ahmednagar, Satara and Sholapur, and was commenced in 1813, the first American Mission in India. Its activities are large and varied. The staff at the beginning of 1919 consisted of 45 missionaries and 655 Indian workers operating in 152 outstations exclusive of Bombay City. Organised Churches number 66 with 8,331 communicants, and 6,939 adherents. There is a Leper work at Sholapur. The Educational work embraces 14 training and secondary schools, with 800 pupils and 179 primary schools, with 6,397 pupils, three-fifths of whom are non-Christians. A large Theological Seminary at Ahmednagar trains for the Indian Ministry. Zenana work and Industrial work are vigorously carried on, the latter embracing carpentry, metal hammering, lace work, carpet weaving and extensive work on an improved hand loom. A school for the blind is conducted on both Educational and Industrial lines. 51,973 patients were treated in the Hospitals and Dispensaries of the Mission last year. The Mission has for 70 years published the "Dnyanodaya," the only combined English and Marathi Christian weekly newspaper. Special evangelistic work is carried on amongst the tribes known as the Bhills and Mangs. This Mission was the first to translate the Christian Scriptures into the Marathi tongue. At Sholapur, a settlement for Criminal Tribes is carried on, under the supervision of Government. *Secretary:* Rev. William Hazen, Byculla, Bombay.

THE MADURA MISSION.—In the S. Madras District, commenced in 1834, has a staff of 49 missionaries and 897 Indian workers, operates in the Madura and Ramnad districts and has a communicant roll of 9,350 with 27,210 adherents and 33 organised churches, many of which are entirely self-supporting and self-governing. Schools number 240 with 13,491 pupils. There is a Christian College at Madura, as also Hospitals for men and women; at Pasumalai are a High School, Theological Institution, Industrial School, Teachers' Training School and Printing Press. The Secretary of the Marathi Mission is the Rev. A. H. Clark, Ahmednagar; and of the Madura Mission, the Rev. C. S. Vanghan, Manamadurai.

The Arcot Mission commenced under the American Board was transferred to the Reformed Church of America in 1851.

THE SCANDINAVIAN ALLIANCE MISSION OF NORTH AMERICA.—Embraces two Branches, one in Bengal and the other in Khandesh. The total mission staff is represented by 10 missionaries and 27 Indian workers. There are 62 communicants and a Christian community of 158. Ten Elementary Schools provide for 160 pupils.

Secretaries: Rev. O. A. Dahlgren, Navapur, Khandesh, and Miss H. Abrahamson, Domar, Bengal. The Branch in Khandesh co-operates with the Swedish Alliance Mission, and both missions having a united yearly conference.

THE SWEDISH ALLIANCE MISSION.—Working among the Bhils in West Khandesh has 19 missionaries and 37 Indian workers. There are 5 congregations with a total membership of 502, of whom 189 are communicants. There are 10 Elementary Schools, and 2 Boarding Schools. The pupils in Aid Schools are 355.

Secretary: Miss. Emma Johanson, Nandurbar West Khandesh.

THE SCANDINAVIAN ALLIANCE MISSION, HIMALAYAS.—(Finnish Branch). The total mission staff is represented by six missionaries and twelve native workers. There are about 100 Communicants, five churches and a Christian community of about 120. One Orphanage with 15 orphans, one Kindergarten school, one Middle School and two Day schools.

Acting Secretary: Miss Kronguist, Lachung via Gangtok, Sikkim.

THE LONDON MISSIONARY SOCIETY.—Commenced work in India in 1793 and occupies 10 centres in N. India, 12 in S. India and 7 in Travancore. The Mission engages in every form of Missionary activity. The European staff numbers 223, Indian workers 2,004; Organised Churches 490; Communicants 13,748 and Christian community 116,575. There are 4 Christian Colleges, students 159; 3 Theological Institutions, students 41; 4 Training Institutions, pupils 114; 22 High schools, pupils 4,849; 25 Boarding schools, scholars 1,167; 9 Industrial schools, pupils 116 and 862 Elementary schools with 36,775 scholars. In Medical work Hospitals number 15, Dispensaries 15, qualified doctors 10, and 3,997 in-patients and 130,220 out-patients for the year.

The main centres of the Mission in N. India are at Calcutta, Benares and Almora. The Bhowanipour Institution at Calcutta is now a Teacher Training College. Evangelistic work is carried on amongst the thousands of pilgrims visiting Benares, and Almora is noted for its

Hospital and Leper Asylum. Special efforts are made amongst the Nama Sudras and the aboriginal tribes known as the Majhwars, Cheros and Pankas. The S. India district is divided into the Kanarese, Telugu and Tamil areas, with 12 stations and 472 outstations. At Nagercoil, (Travancore) is the Scott Memorial College with 985 students, a Church and congregation

said to be the largest in India, and a large Printing Press, the centre of the S. Travancore Tract Society.

N. India Secretary: Rev. J. H. Brown, B.A., B.D., Calcutta.

S. India Secretary: Rev. E. P. Rice, B.A., Bangalore.

ALL-INDIA MISSIONS.

THE CHRISTIAN AND MISSIONARY ALLIANCE—Dates from the year 1893 under the name of the International Missionary Alliance, but a number of its missionaries were at work in Berar Province much earlier. The work is confined to the provinces of Berar, Khandesh and Gujarat. There is a staff of 72 missionaries and 132 Indian workers. The number of Mission stations is 19, with additional outstations. There is a Christian community of 2,870 people. There are 4 orphanages, 2 for boys and 2 for girls; 3 training schools for Indian workers, and 1 English congregation at Bhusawal. *Secretaries:* for Gujarat: Rev. J. N. Culver, Viramgam, Gujarat; for Berar and Khandesh: Rev. S. H. Auernheimer, Malkapur, Berar.

THE CHURCH OF THE BRETHREN (AMERICAN)—Opened work in 1895, and operates in the Southern part of Gujarat, Khandesh, and Thana Districts. Its staff numbers 29 including missionaries' wives, and 105 Indian workers. The baptised (immersed) membership stands at 1,125; education is carried on in 2 Girls' Boarding schools, 4 Boarding schools for boys, and 81 Village Day schools. Industrial work is connected with four of the schools, and a Farm Colony is established at Umballa.

THE POONA AND INDIAN VILLAGE MISSION—Founded in 1893 operates in the Poona, Satara and Sholapur Districts, with 23 European and 32 Indian workers. The number of Indian Christians is 45. The main work is evangelism of the villages, with Women's Zenana work, and Village schools. There are 4 Village Dispensaries, including a hospital and a large medical work in the great pilgrimage city of Pandharpur, and a hospital at the headquarters of the Mission, Nasrapur, in the Bhor State. *Secretary:* Mr. J. W. Stothard, Nasrapur, Poona District.

THE AMERICAN CHURCHES OF GOD MISSION—Has two missionaries at Bogra, Bengal.

THE INDIAN CHRISTIAN MISSION—Founded in 1897, has 31 Organised Churches, 10 Missionaries, 24 stations, 41 out-stations, 1,392 Communicants, and 30 Primary schools in the Ellore district, S. India, stations also in Berenag, Kumaon, N. India, and Nuwara Eliya, Ceylon. *Secretary:* A. S. Paynter, Nuwara Eliya, Ceylon.

There are 3 **PENTECOSTAL MISSIONS** at work. The Pentecostal Mission in W. Khandesh and Thana Districts; the Pentecostal Church of the Nazarine Mission at Buldana, Berar, and the Pentecost Bands of the World Mission with a Boys' Orphanage at Dondi Lohara, C. P., a Girls' Orphanage at Raj Nandgaon, and a Leper Home at Raj Nandgaon. The staff consists of 14 missionaries and 28 native preachers and Bible women.

THE SANARPUR AND LOHAGHAT DISTRICT BIBLE AND MEDICAL MISSION—Was established at Lohaghat, 48 miles from Almora, in 1910. Amongst the faith missions are the Vanguard Mission at Sanjan, Thana District, with 6 Missionaries; and the Church of God Mission with 7 Missionaries at Lahore. The Burning Bush Mission has a staff of 8 Missionaries at Allahabad. The Tehri Border Village Mission is the only Christian enterprise in the Himalayan Native State of that name, its agents are stationed at Landour, and have translated portions of the New Testament into the Tehri-Garhwali language. *Secretary:* Miss A. N. Budden.

THE HEPHZIBAH FAITH MISSIONARY ASSOCIATION has six missionaries. *Agent:* D. W. Zook, Adra, B. N. Ry.

THE TIBETAN MISSION—Has 4 Missionaries with headquarters at Darjeeling, and Tibet as its objective. *Secretary:* Miss J. Ferguson, Darjeeling.

THE INDIAN MISSIONARY SOCIETY OF TINNEVELLY (DORNAKAL MISSION)—Opened in 1904 operates in the Warangal District of the Nizam's Dominions. It is the missionary effort of the Tamil Christians of Tinnevely. There are now 2,406 Christians in 69 villages. *Secretary* Mr. J. Anbudaiyan, B.A., L.T., Palamcottah.

THE MISSION TO LEPERS—Founded in 1874, is an interdenominational and international Society for the establishment and maintenance of Asylums for Lepers and Homes for their untainted children, working largely in India, China, and Japan. Its work in India is carried on through co-operation with 29 Missionary Societies. The Mission now has 39 Asylums of its own with over 4,223 inmates, and is aiding or has some connection with work for lepers at 21 other places in India. In the Mission's own and aided Asylums there are about 3,100 Christians. The total number of lepers reached by the Mission in India is about 5,000.

An important feature of the work of the Mission is the segregation of the untainted or healthy children of lepers from their diseased parents. Nearly 600 children are thus being segregated and saved from becoming lepers.

The Mission very largely relies on voluntary contributions for its support. *Patroness:* The Dowager Duchess of Dufferin and Ava. *President:* The Primate of Ireland. *Head Office,* 28, North Bridge, Edinburgh. *Mr. Wellesley C. Bailey,* General Superintendent. *General Secretary:* Mr. W. H. P. Anderson, 20, Lincoln Place, Dublin. *Secretary for India:* The Rev. Frank Oldrieve, Comely Bank, Simla, to whom communications and subscriptions may be sent,

THE REGIONS BEYOND MISSIONARY UNION.—An interdenominational Society commenced work at Motihari, Behar, in 1900, and now occupies 4 stations and 7 outstations in the Champaran and Saran Districts, with a staff of 13 Europeans, and 34 Indian workers. There are 21 Elementary schools, with 517 pupils, a Girls' and a Boys' Orphanage and Boarding school, communicants number 50.

THE NATIONAL MISSIONARY SOCIETY OF INDIA—Established 1905, it has a staff of 21 Indian Missionaries and 20 helpers operates in Montgomery District (the Punjab), Nukkar Thasil (U. P.), North Kanara (Bombay), Karjat-Karmala Talukas (Bombay), Omalur (Madras) and Bhagalkund Agency (C.I.). Christian community 2,000. Twelve schools. Two Dispensaries, Organ: *The National Missionary Intelligencer* (a monthly journal in English sold at 12 as. per year post free).

General Secretaries: Mr. K. T. Paul, B.A., O. B. E. Calcutta and Mr. P. O. Philip, B.A., M. M. S. Office, Vepery, Madras.

THE SEVENTH DAY ADVENTISTS.—Established in India in 1895. Work carried on in English, Hindi, Urdu, Punjabi, Bengali, Santali, Tamil, Telugu, Malayalam, Marathi, Gujarati, Burmese and Karen: including schools, dispensaries and evangelical stations. *President:* W. W. Fletcher, 17, Abbott Road, Lucknow: *Secretary and Treasurer:* A. H. Williams.

THE AMERICAN MENNONITE MISSION.—Established 1899, works in the C. Provinces. Mission staff numbers 20, Indian workers 80, Church members 581, 1 Industrial Training Institution, 1 High School, 1 Bible School, 2 Orphanages, 1 Widows' Home, 1 Leper Asylum; Elementary Schools, 8; Dispensaries, 3; Hospital, 1. *Superintendent:* Rev. P. A. Friesen, P. O. Jamgaon, via Drug, C. P.

THE GENERAL CONFERENCE—MENNONITE MISSION.—Started in 1901 in the C. Provinces. Workers number 12; Leper, Medical, Orphan, Zenana, Evangelistic and educational work carried on. *Secretary:* Rev. E. B. Sterner, Janjgir, C.P.

THE KURKU AND CENTRAL INDIA HILL MISSION.—Established 1890 in the C. P. and Berar, has a mission staff of 14, Indian workers 20; Churches 6, Communicants 105; Christian community 209; 2 Boarding and 5 Elementary schools, with 74 pupils. *Secretary:* Rev. Carl Wydner, Ellichpur, Berar.

THE CEYLON AND INDIA GENERAL MISSION.—Established 1893, occupies stations in India in the Coimbatore and Anantapur Districts. Mission staff 23; Indian workers 76; Churches 10, with Communicants 271, and Christian community 750; Orphanages 3; Elementary schools 29; pupils 682.

Secretary: Pastor W. Mallis, Coonoor, Nilgiris.

THE BOYS' CHRISTIAN HOME MISSION.—Owes its existence to a period of famine, was commenced in 1889. Mission staff 11, Indian workers 22. There are elementary schools with 52 children, two orphanages and a Widows' Home, where Industrial training is given. There are three Mission Stations—At Dhond, and at Bahraich, and Benares in United Provinces. *Director:* Rev. Albert Norton, Dhond, Poona District.

Ladies' Societies.

ZENANA BIBLE AND MEDICAL MISSION.—This is an interdenominational society, with headquarters 33 Surrey Street, London, working among women and girls in seven stations in the Bombay Presidency, fourteen in United Provinces, and five in the Punjab. There are 76 European Missionary ladies on the staff and 28 Assistant Missionaries, 151 Indian workers, teachers and nurses and 140 Bible women. During 1917 there were 1,453 in-patients in the five hospitals supported by the Society (Nasik, Benares, Jaunpur, Lucknow and Patna), but the Victoria Hospital, Benares, was practically closed in 1917. There were 18,208 out-patients 75,395 attendances at the Dispensaries. In their 44 schools were 3,700 pupils, and there is a University Department at Lahore. The evangelistic side of the work is largely done by house to house visitations and teaching the women in Zenanas; 3,189 women in 2,778 houses were so taught. The 140 Bible women visited 542 villages; the number of houses was 1,230.

THE LUDHIANA ZENANA AND MEDICAL MISSION has removed its headquarters to Lahore leaving one Bible woman working in the city of Ludhiana. Four missionaries are in Lahore and work is being carried on in the Lahore District in connection with the American Presbyterian Mission.

THE MISSIONARY SETTLEMENT FOR UNIVERSITY WOMEN was founded in Bombay in 1895 to reach the higher class of Indian ladies, its activities now include a hostel for women students, in addition to educational, social, and evangelistic work. *Warden,* Miss Dobson, Girgaum, Bombay.

THE MUKTI MISSION, the well-known work of Pandita Ramabai, enables upwards of 350 widows, deserted wives and orphans to earn a comfortable living by means of industrial work organised by the Pandita, supported by a good staff of Indian helpers. A large staff of European Missionary Ladies do evangelistic work in the surrounding Kedgaon, Poona District.

Disciple Societies.

The India Mission of the Disciples of Christ (Foreign Christian Missionary Society of Cincinnati, Ohio, and Christian Women's Board of Missions of Indianapolis combined) commenced work in 1882; its area Central and United Provinces; number of Indian Churches 14, and immersed communicants 18,450. The Christian Constituency numbers 2,945. Its staff, including Missionaries' wives, 76; Asst. missionaries 2 and Indian Workers' staff 319. There are 8 Hospitals, 13 Dispensaries, with 109,994 in-patients and out-patients for the past year. Two Orphanages and an Industrial Home show 536 inmates, and one Boarding School for girls and two hostels for boys, 664 inmates. Two leper asylums with 95 inmates. Tubercular Sanatorium at Pindra Road: 44 inpatients during year. In connection with the industrial work a farm of 400 acres has been taken at Damoh, an industrial School at Damoh which teaches carpentry, needle work industry at Kulpahar which did Rs. 6,200 worth of business last year. Printing work at Jubulpore 3,000,000 pages of Christian Literature

last year. There are 8 Middle schools, 34 Primary schools with 2,917 scholars; 2 Boarding schools, with 300 students. An active zenana work is carried on, and there is a home for women and children.

The Australian branch has three Mission stations in Poona District. The Great Britain and Ireland branch has two mission stations, one in Mirzapur District, U. P., and one in alamu District, Orissa. These have no organic connection with the India Mission of the Disciples of Christ.

Secretary: Rev. W. B. Alexander, Jubbulpore, C. P.

Undenominational Missions.

THE CENTRAL ASIAN MISSION, with a Church, Dispensary and School is found on the N.-W. Frontier, conducted on the lines of the China Inland Mission, and has Kafristan as its objective.

The Friends' Foreign Missionary Association with Headquarters at Hoshangabad, Central Provinces, commenced in 1874. Work has recently been opened up in the Gwalior and Bhopal States. There are 6 Churches, 24 Missionaries, 197 members, Orphanages for Boys and Girls, 1 Anglo-Vernacular school, 15 Day Schools, one High School and one Zenana Hospital with a general dispensary connected with the Mission, in addition to a self-supporting weaving community at Itarsi, and a Farm Colony near Hoshangabad. *Secretary:* Mr. B. H. Backhouse, Hoshangabad, C. P.

The American Friends' Mission with 5 Missionaries is working at Nowgong. *Secretary:* Miss D. Fistler, Nowgong, C. I.

The Old Church Hebrew Mission was established in 1858, in Calcutta, and is said to be the only Hebrew Christian Agency in India. *Secretary:* J. W. Pringle, Esq., Calcutta.

THE OPEN BRETHREN—Occupy 46 stations in the U. Provinces, Bengal, S. Mahratta, Godaveri Delta, Kanarese, Tinnevely, Malabar Coast, Coimbatore and Nilgiri Districts. They hold an annual Conference at Bangalore.

Lutheran Societies.

THE AMERICAN EVANGELICAL LUTHERAN MISSION. General Council, founded in 1844 for the Godaveri and Kistna Districts, has its Headquarters at Rajahmundry. Its staff consists of 27, including Missionaries' wives and Lady Doctors, with 504 Indian Workers. The membership is 25,800. There are Boys' and Girls' Central Schools, Mission Press, a well-equipped hospital and Book Depot at Rajahmundry, and a High School at Peddapur and another at Bhimavaram, since November 1918 the two American Lutheran Missions at Guntur and Rajahmundry have been amalgamated, existing as two Conferences now. *Chairman:* The Rev. E. Neudoeffer, Bhimavaram.

The 'General Synod' Section of the above, has its headquarters in Guntur, founded in 1842. Its Christian community numbers 46,594, with 16,242 communicants, 27 missionaries inclusive of wives, and 815 Indian workers, shewing an increase of 61 per cent. during the past ten years. The following

institutions are connected with the Mission, a second grade College, High School for Girls, Hospital for women and children, Normal Training School, and Industrial School. *Secretary:* The Rev. Victor McCauley, Guntur.

THE EVANGELICAL NATIONAL MISSIONARY SOCIETY OF SWEDEN, founded in 1856, occupies the districts of Betul, Chhindwara and Saugor in the Central Provinces. There are 1,619 Church members and 11 Indian Congregations. The staff numbers 27, including women, with an Indian staff of 168. Schools number 36 with 1,517 children. Only two of the schools are Secondary, all the rest are Primary Schools. There are small dispensaries at most of the stations. There are three Christian Colonies, 1 Workshop with an aided Carpentry School, 1 Female Industrial School, 1 Widows' Home, 5 Orphanage and Boarding Schools for Christian children. *Secretary:* Rev. P. E. Froberg, Chhindwara, C. P.

THE BASEL MISSION was commenced in 1834, and occupies 26 main stations and 128 out-stations in the Coorg, S. Mahratta, Nilgiris, and N. and S. Canara districts of S. W. India. The total European Staff numbers 41 with 1,110 Indian workers. There are 66 organised Churches, with a membership of 19,762. Educational work embraces 204 schools (including 2 Theological, 9 Boarding and 4 High schools) with 16,970 Elementary and 3,150 Secondary school pupils and 831 scholars in Boarding Institutions and Orphanages. There are good Hospitals at Betgiri and Calicut under European doctors with 3 branch hospitals and 4 Dispensaries connected; 66,804 patients were treated last year. There is a Leper Asylum at Chevayur.

The Industrial work of the Mission comprises 17 establishments, embracing one mechanical establishment of a first rate order at Mangalore, 2 Mercantile branches, 7 Weaving and 7 Tile work establishments in the Kanara and Malabar districts; employes number 3,633. A large Printing Press at Mangalore issues publication in the Kanarese, Malayalam, Tulu and English languages.

Secretary: Rev. B. Luthi, Mangalore.

THE CHURCH OF SWEDEN MISSION—Was founded in 1874. Operated till 1915 in the Madura, Tanjore, Trichinopoly and Ramnad Districts. Since 1915 the Mission having taken full charge of the former Leipzig Evangelical Lutheran Mission field, works also in the Madras, Chingleput, Coimbatore, Salem and S. Arcot Districts with diaspora congregations in Rangoon, Penang and Colombo. European staff numbers 21, Ordained Indian Ministers 32, Indian workers 104, Organised Churches 41, Baptised Membership 20,847. Schools 261, Pupils 12,825 (9,750 boys, 3,079 girls). Teaching staff 655. *Secretary:* Rev. E. Heuman, D. D., Trichinopoly.

THE MISSOURI EVANGELICAL LUTHERAN MISSION—is located in North Arcot, Salem, Tinnevely and Travancore with a staff of 5 Missionaries. Three Training Institutions, 155 pupils, 65 Elementary schools with 2,789 pupils are connected with the Mission. *Secretary:* Rev. Henry Hamann, Ambur, N. Arcot District.

THE DANISH EVANGELICAL LUTHERAN MISSION.—Established 1863 in South Arcot, working there and in North Arcot, on the Shevaroy Hills and in Madras, has a total staff of 44 Missionaries and 211 Indian workers, Communicants 1,050, Christian community 3,000, 1 High School, 2 Boarding Schools, 4 Industrial Schools, Elementary Schools 58, total scholars 3,484; Dispensary patients 21,849.

Chairman: Rev. J. Bittmann, 38, Broadway, Madras.

THE SANTAL MISSION OF THE NORTHERN CHURCHES (formerly known as the India Home Mission to the Santals)—Founded in 1867, works in the Santal Parganas, Goalpara (Assam), Malda and Dinajpur. Work is principally among the Santals. The mission staff numbers 25; Indian workers 342; communicants 3,000; Christian community 20,300; organised churches 36; boarding schools 3; pupils 368; elementary schools 31; pupils 535; industrial school, 1. *Secretary*: Rev. P. O. Bodding, Dumka, Santal Parganas.

MISSIONS AND ENEMY TRADING ACT.—In May 1918, the following notice regarding Missions was published in the "Gazette of India":—"The following missions or religious associations are declared companies under Act 2 (the Enemy Trading Act) of 1916:—The Leipzig Evangelical Lutheran Mission, Madras, the Hermansberg Evangelical Lutheran Mission, Madras, the Schleswig Holstein Evangelical Lutheran Mission, Madras, the Gossner Evangelical Lutheran Mission, of the United Provinces, and Behar and Orissa, the German Evangelical Lutheran Mission of Ranchi, Bihar and Orissa. The Governor-General in Council notifies that the powers conferred under Section 7 of the said Act shall extend to the property, movable and immovable, of these missions or religious associations."

In June, 1919, the Government of India stated:—"Effect is already being given to the suggestion that enemy missions in India should be taken over by British societies. The properties and undertakings of hostile missions have been vested in the Provisional Custodian of Enemy Property with a view to their transfer to boards of trustees composed partly of non-official members nominated by the National Missionary Council of India with the approval of the Government of India and partly of Government officials, and those Boards of Trustees will in due course transfer the undertakings and properties to a missionary society to be selected by them with the approval of the Governor-General in Council.

Methodist Societies.

The Methodist Episcopal Church began its Indian Mission in 1857, and with the exception of Assam, and the N. W. Frontier Provinces is now established in all the political Divisions of India. Its number of baptised Christians stands at 266,275, under the supervision of 240 ordained and 900 unordained Ministers. Schools of all grades number 1,569 with 39,087 students, Sunday School scholars stand at 126,000, and young peoples' societies at 604, generally known as Epworth Leagues. Thirty

Anglo-Indian Congregations are found in the larger Cities, with one College, 6 High schools, and numerous Middle schools for this class. For Anglo-Vernacular Education the mission has 3 Colleges, 12 High schools and 62 schools of Lower grade. The net increase from the non-Christian races has been at the rate of 15,000 per annum, for the last decade. The Isabella Thoburn Training College at Lucknow is a large Institution. There are large printing presses at Calcutta, Madras and Lucknow.

In Burma there are 9 schools, with 1,484 pupils, a large Boarding and Day school for European girls at Rangoon, a hill station Boarding school for girls at Thandaung, and an Anglo-Indian Church at Rangoon.

While financially supported by the Board of Foreign Missions of the American Methodist Episcopal Church, ecclesiastically the Church in India is independent of foreign control, being under the supervision of its own bishops, viz., *Bishop*, F. W. Warne, Lucknow. *Bishop*, J. E. Robinson, Bangalore, and *Bishop*, J. W. Robinson, Bombay.

The American Wesleyan Mission, Sanjan, Thana District and Pardi, Surat District, has seven Missionaries on the field and three more under appointment, two main stations, six outstations, nine Schools, one orphanage and an industrial farm. *Superintendent*: C. B. Harvey, Sanjan, Thana District.

The Reformed Episcopal Church of American (Methodist) at Lalitpur and Lucknow U. P. has 2 Missionaries, 4 Outstations, 2 Orphanages, and a membership of nearly 100.

THE WESLEYAN METHODIST MISSIONARY SOCIETY commenced work in India in 1817 (Ceylon in 1814). The Mission in India is organised into 10 District Synods with 3 Provincial Synods. There is a large English work connected with the Society, 20 ministers giving their whole time to Military work and English churches.

The districts occupied include 64 main stations in Bengal, Madras, Mysore, Bombay, Punjab, Central Provinces, Hyderabad (Nizam's Dominions), Trichinopoly and Burma. The European staff numbers 148 with 3,150 Indian workers; Communicants 19,633, and total Christian community 58,253. Organised Churches 93.

Educational work comprises 7 Christian Colleges, students, 3,807; 9 Theological Institutions, pupils, 129; 21 High Schools, pupils, 5,548; 10 Industrial schools, pupils, 602; 1,163 Elementary schools, with 58,460 scholars. In Medical work there are 12 hospitals, 22 dispensaries, 18 qualified doctors, 4,757 in-patients and 285,806 attendances at the dispensaries.

The above particulars are those published for 1915.

Vice-Chairman of General Synod: Rev. D. A. Rees, Bangalore.

The Women's Foreign Missionary Society of the M. E. Mission is divided into 6 Conferences and is co-extensive with the main work of the Mission. 110 Lady Missionaries are engaged in Educational, Zenana, and Evangelistic

and Medical work. The Secretary for the Bombay Conference is Miss C. H. Lawson, Talegaon-Dabhada, Poona District.

THE FREE METHODIST MISSION of North America—Established at Yeotmal, 1893, operates

in Berar with a staff of 16 Missionaries and 24 Indian workers. Organised church 1, Communicants 70; 1 Industrial and 6 Elementary schools, with 175 pupils. Secretary: Miss Grace E. Barnes, Yeotmal, Berar.

ROYAL ARMY TEMPERANCE ASSOCIATION.

In 1862 there was started among the British troops in Agra a small Society, under the leadership of Rev. G. Gregson, Baptist minister, which after a short time took the name of the Soldiers' Total Abstinence Society.

For some ten years the Society struggled with varying success, spreading to other Garrison Stations, but at the end of that time, though it had obtained recognition from the Horse Guards, and was the first Society whose Pledge was so recognised, the membership was not more than 1,200. In the year 1873, however, through the influence of the then Commander-in-Chief, the work was placed on a firmer footing, the Rev. Gelson Gregson gave up his whole time to it, and by accompanying the troops through the Afghan War, making an extended tour through Egypt, and bringing the work into close touch with troops, both during peace and war, in the year 1886, when he left the Society, it numbered about 11,000 members. He was followed by a Madras Chaplain, who after two years gave place to the Rev. J. H. Bateson. In 1886, the late Lord Roberts, Commander-in-Chief, organised his Scheme for Regimental Institutes, which have had a wonderful effect on the life of British soldiers in the East; and the Total Abstinence Society was so far incorporated into the scheme as to be allowed ample accommodation, and many practical benefits, in every Unit. At the same time the name was changed to that of the Army Temperance Association, and the work of various societies thus linked together, under one organisation. The effect has been more than even the inaugurator himself ever hoped for. The membership rose steadily from that date and still increases.

Growth of the Society.—In 1889 there were 12,140 members; in 1899, 20,688; in 1909: 30,220, while in 1913-14, the total was 35,000, or over 45 per cent. of the total garrison in India. In 1908, the Secretary having retired after 20 years' work, the Rev. H. C. Martin, M.A., a Chaplain in Bengal, was selected by H. E. Lord Kitchener, to the post of Secretary. Twenty years ago, the Association, which has now for some years been the Royal Army Temperance Association, with the Patronage of King Edward VII, and later of the King Emperor, George V., organised a similar Society in Great Britain, with headquarters in London, from which the troops in South Africa, the Mediterranean, etc., are controlled, so that the whole British Army receives the attention of the Association.

Varied Activities.—What primarily has been the effort of the Association, namely, the decrease of Intemperance, and promotion of sobriety among soldiers has gradually grown

into work of every kind, in the interests of soldiers; promotion of sport, occupation of spare time, assistance towards employment in Civil Life, advice and information on the subject of Emigration, provision of Furlough Homes, all tend to enlist the support of officers and men in the Association, and add to its value to them, and to the efficiency of its work, generally. The wonderful change that in late years has taken place in the character of the British Army, in India especially, is due to various causes, including the increased interest in games and sports, the spread of education, the different class of men enlisted, and so on, but the R. A. T. A. has always been given its due share among other causes, by all authorities and Blue Books, and particularly by Officers Commanding Divisions, Brigades and Units. These changes in conduct are seen most plainly in the increased good health of the Army in India.

Effect in the Army.—In the year 1889, 1,174 British soldiers died in India, and 1,800 were invalidated unfit for further duty; in 1910, only 330 died, and 484 were invalidated. In 1889, 688 underwent treatment for Delirium tremens, in 1910, only 37. In conduct the same difference is to be found; as late as 1901 as many as 545 Courts Martial were held on men for offences due to excessive drinking; in 1906 only 217. In 1904, 2,231 good conduct medals were issued; in 1910, there were 4,581. In regard to the character of the men themselves, who become members of the Association, during their service, we find that in 1912, 59 per cent. on transfer from the Colours obtained Exemplary characters, and 93 per cent. either Exemplary or Very Good; the remainder were for the most part men who, after some years of heavy drinking, had towards the end of their service been persuaded to try and reform themselves, but not soon enough to avoid the consequences of previous excess.

Organisation.—The War has necessarily brought increased work upon this society, the results of which were very quickly apparent. Capacious reception sheds fitted up in the Docks at Bombay and Karachi, proved of the greatest value to troops moving from India, and to the large number coming in: special arrangements aided by a loan from the Government of India, enabled the R. A. T. A. to organise branches in every Territorial unit immediately on arrival, special attention being paid to small detachments and to the Hill stations. In consequence there were, within a month of the completion of the Garrison, over 70 Territorial Branches, containing nearly 60 per cent. of the new arrivals, and this has increased consistently ever since. In addition to covering all troops from

Aden to Singapore, the R. A. T. A. is the only Society working in Mesopotamia. Institutes have been opened and the cordial good will of the authorities enables the R. A. T. A. to provide many amenities to the very trying experiences of this Force. The men relieved, and sent back to India for periodic rest, in addition, receive a warm welcome and entertainment at the hands of the Association. The following is the organisation of the Council and management:—

Patron: His Majesty the King Emperor.

President: His Excellency the Commander-in-Chief.

Council:

The General Officers, Heads of Departments, Army Headquarters.

The General Officers Commanding Division.

Two Officers Commanding Regiments.

Officers of the R. A. M. C. and I. M. S.

Two Regimental Quartermasters.

Representatives of the various Churches.

Executive Committee.

Brig.-General T. M. Luke, O.B.E., D.S.O., R.A., President.

Lt.-Colonel A. Shairp, C.M.G.

Lieut.-Colonel F. H. Moody, M.C.

General Secretary: Miss I. M. Villiers.

Auditor: Neilson, King and Simson.

Bankers: Bank of Bengal and Alliance Bank of Simla.

Head Office: Talbot House, Simla.

THE ANGLO-INDIAN TEMPERANCE ASSOCIATION—Founded in 1888 by the late Mr. W. S. Caine, M.P., is a Home Association which has been the means of establishing a net work of Temperance Societies throughout the Indian Empire, and has provided a common platform upon which Christians, Hindus, Mahomedans and Parsis unite for the moral elevation of the Indian peoples. There are 280 Indian Societies affiliated with the Association. The President is Sir J. Herbert Roberts, Bart., M.P., and Secretaries, Sir Bhalechandra Krishna, Kt., L.M. (Bombay), and Mr. John Turner Rae (London). The interests of the Association are especially represented in Parliament by the President, and the Rt. Hon. T. R. Ferens, M.P., Mr. J. Herbert Lewis, M.P., and the Rt. Hon. Sir Thos. Whitaker, M.P., all of whom are members of the Association's Council. The Association publishes a quarterly journal *Abkari*, edited by Mr. Frederick Grubb. Officers—Arkbrook, Home Park Road, Wimbledon.

THE ALL-INDIA TEMPERANCE CONFERENCE.—Growing out of the Association mentioned above and in closest relation with it is the

All-India Temperance Conference, formed in 1903, which meets every year, as a matter of convenience, at the same time and place as the Indian National Congress, but having no official connection with it. The President is elected annually. The President for 1914 was the Rev. Herbert Anderson. The membership of the Conference is the 280 Indian Temperance Societies affiliated with the Anglo-India Temperance Association as above, from each of which delegates are sent to the Annual Meeting of the Conference. Special Councils embracing Presidency Societies are established at Bombay, Allahabad, Calcutta and Madras, each of which has its own local President, Secretary and Committee. The Bombay Temperance Council was inaugurated in 1897. It consists of delegates elected by about 23 different temperance, religious and philanthropic societies at work in Bombay, Poona, Ahmedabad and Surat, including several of the Christian churches, the International Order of Good Templars, the International Order of Rechabites and the Women's Christian Temperance Union. The medium of communication between the Societies composing the Conference is the *Abkari*, published quarterly from England by the A. I. T. A. Amongst the general aims of the Conference may be mentioned:—

The separation of the licensing from the revenue;

The doing away with the present system of license auctioneering;

The reduction of the present number of liquor shops and the prevention of the formation of new ones in important positions especially in the crowded areas

The later opening and the earlier closing of liquor shops, and the entire closing of them on public holidays;

The introduction of Temperance Teaching in the Government Elementary Schools and Colleges, which despite the desire of Government expressed in their Circular letter No. 730-37 of 12th Sept. 1907 to "deal with the subject of intemperance in a few sensible lessons in the sanctioned Readers," has not yet been adequately treated and as in the corresponding schools in England.

The general spread of Total Abstinence principles depends more largely upon the individual Societies constituting the Conference than upon the official body. Amongst the methods are lantern addresses, dramatic representations and singing by itinerant preachers. Twelve paid Lecturers travel through various districts holding public meetings and addressing the masses wherever possible. Educational work is especially to the front in the Punjab district through the Amritsar Society.

Warrant of Precedence.

(Brought up to 1st January 1919.)

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith, Empress of India,—

To all to whom these presents shall come :

WHEREAS it hath been represented unto Us that it is advisable that the rank and precedence of persons holding appointments in the East Indies as regulated by Our Royal Warrant, dated the 18th day of October 1876, should be altered, We do therefore hereby declare that it is Our will and pleasure that in lieu of the table laid down in Our said recited Warrant, the following table be henceforth observed with respect to the rank and precedence of the persons hereinafter named, viz. :—

1. Governor-General and Viceroy of India.
2. Governors of Madras, Bombay and Bengal.
3. President of the Council of the Governor-General.
4. Lieutenant-Governor when in his own territories.
5. Commander-in-Chief in India; and officers in charge of the Zhoob, Quetta-Pishin and Thal-Chotiali Districts, throughout their respective charges, whether British or Agency territory.
6. Lieutenant-Governor.
7. Chief Justice of Bengal.
8. Bishop of Calcutta, Metropolitan of India.
9. Ordinary Members of the Council of the Governor-General.
10. Commander-in-Chief of His Majesty's Naval Forces in the East Indies.
11. Chief Justice of a High Court other than that of Bengal.
12. Bishops of Madras and Bombay.
13. Ordinary Members of Council in Madras, Bombay and Bengal; and Members of the Executive Council of the Lieutenant-Governor of Bihar and Orissa when within their own jurisdiction.
14. Lieutenant-Generals Commanding the Forces, Punjab, Bengal, Madras, and Bombay; and Chief of the Staff.
15. Chief Commissioners of the Central Provinces and Assam, Residents at Hyderabad and in Mysore; Agents to the Governor-General in Rajputana, Central India, and Baluchistan; Agent to the Governor-General and Chief Commissioner, North West Frontier Province; Executive Members of the Council of the Lieutenant-Governor of Bihar and Orissa when outside their jurisdiction.
16. Puisne Judges of a High Court.
17. Chief Judge of a Chief Court.
18. Military Officers above the rank of Major-General.
19. Comptroller and Auditor-General.
20. Additional Members of the Council of the Governor-General for making Laws and Regulations and the Chairman of the Railway Board.

21. Bishops of Lahore, Rangoon, Lucknow and Nagpur.

22. Secretaries to the Government of India; the Members of the Railway Board and Joint Secretaries to the Government of India.

23. Commissioner in Sind.

24. Judges of a Chief Court, Recorder of Rangoon and Judicial Commissioners, Burma.

25. Chief Secretaries to the Governments of Madras and Bombay and the Chief Commissioner of Delhi when within his own jurisdiction.

26. Majors-General, Members of a Board of Revenue, Commissioners of Revenue and Customs, Bombay; Financial Commissioners, Punjab and Burma, Inspector-General of Irrigation; Director-General, Indian Medical Service.

27. Judicial Commissioners, including Additional Judicial Commissioners of Oudh, the Central Provinces, and Sind; the Financial Commissioner, Central Provinces.

28. Additional Members of the Councils of the Governors of Madras, Bombay and Bengal for making Laws and Regulations, Members of the Legislative Council of a Lieutenant-Governor.

29. Vice-Chancellors of Indian Universities.

FIRST CLASS.

30. Members of the Indian Civil Service of 30 years' standing.

31. Advocates-General, Calcutta, Madras and Bombay.

32. Commissioners of Divisions, the Superintendent of Port Blair, and Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts) within their respective charges; the Revenue and Judicial Commissioner in Baluchistan, within British Baluchistan and the Agency territories.

33. Chief Secretaries to Local Governments other than those of Madras and Bombay.

34. Surveyor-General of India, Directors-General of the Post Office, of Telegraphs in India and of Railways, Chief Engineers, first class, Accountants-General, Military and Public Works Departments, Director, Royal Indian Marine, and Manager, North-Western Railway and Directors of Railway Construction and Railway Traffic and the Chief Engineer, Telegraphs.

35. Bishops (not territorial) under license from the Crown.

36. Archdeacons of Calcutta, Madras and Bombay.

37. Brigadiers-Generals; Consuls-General.

38. Commissioners of Divisions; Revenue and Judicial Commissioner in Baluchistan, when in Kelat or Las Bela or elsewhere outside the limits of his charge; and the Chief Commissioner of Delhi.

39. Commissioner of Northern India, Salt Revenue, and Opium Agents, Benares and Bihar, and Director, Central Criminal Intelligence Department, and the Educational Commissioner with the Government of India.

40. Secretaries and Joint Secretaries to Local Governments, the Private Secretary to the Viceroy; Members of the Legislative Council of a Chief Commissioner.

SECOND CLASS.

41. Members of the Indian Civil Service of 23 years' standing, Colonels and Consuls.

42. Military Secretary to the Viceroy.

43. Judicial Commissioners of the Hyderabad Assigned Districts and Baluchistan; the Superintendent of Port Blair; Residents, Political Agents, and Superintendents drawing Rs. 2,000 a month and upwards (not being Collectors or Deputy Commissioners of British Districts).

44. Inspector-General of Forests in India; Director of the Geological Survey; Director-General of Education in India.

45. Standing Counsel to the Government of India.

46. Directors of Public Instruction, and Inspectors-General of Police and Prisons under Local Governments, Accountants-General and the Director of the Indian Institute of Science.

47. Survey Commissioner and Director of Land Records and Agriculture, Bombay; Commissioners of Settlements; and Controllers of Military Accounts; Deputy Military Auditors-General and Senior Controller of Military Supply Accounts.

48. Chief or Senior Civil Secretary to a Local Administration.

49. Chief Engineers, second and third classes; Deputy Surveyor-General; Deputy Director-General of Telegraphs in India, Director-in-Chief, Indo-European Telegraph Department and Secretary to the Railway Board.

50. Divisional and District and Sessions Judges, Collectors and Magistrates of Districts; Deputy Commissioners of Districts; Deputy Superintendent of Port Blair; the Chief Officer of each Presidency Municipality within their respective charges; and the Judicial Commissioner, Chota Nagpur; Chairman of the Boards of Trustees for the improvement of the Cities of Bombay and Calcutta, and President, Rangoon Municipal Committee, within their respective charges.

51. Archdeacons of Lahore, Lucknow, Rangoon and Nagpur.

52. Deputy Secretaries to the Government of India and Director-General of Commercial Intelligence.

53. The Senior Chaplains of the Church of Scotland in Bengal, Madras, and Bombay.

54. Remembrancers of Legal Affairs and Government Advocates under Local Governments; Chief Conservators of Forests; and President, Forest Research Institute College, Dehra Dun.

55. Officers in the First Class Graded List of Civil Offices now reserved for Members of the Indian Civil Service; the Deputy Military Accountant-General and the Junior Controller of Military Supply Accounts.

THIRD CLASS.

56. Members of the Indian Civil Service of 18 years' standing and Lieutenant-Colonels.

57. The Deputy Director, Royal Indian Marine.

58. The Assistant Director, Royal Indian Marine.

59. Commanders and Inspectors of Machinery, Royal Indian Marine.

60. Political Agents and Superintendents drawing less than Rs. 2,000 a month (not being Collectors or Deputy Commissioners of British Districts), within their own charges; the Political Agent in Kelat; and District Judges in Lower Burma and Judge of the Small Cause Court, Rangoon, within their respective charges.

61. Secretaries to Local Administrations other than those already specified, the First Assistant to the Agent to the Governor-General in Baluchistan, First Asstt. to the Resident at Hyderabad and in Mysore and to the Agents to the Governor-General in Rajputana and Central India.

62. Consulting Engineers to the Government of India for Railways; Chief Inspector for Explosives in India and Consulting Architect to the Government of India.

63. Private Secretaries to Governors.

64. Military Secretaries to Governors.

65. Administrators-General.

66. Sanitary Commissioners under Local Governments; Postmasters-General; the Comptroller, Post Office; Conservators of Forests, first grade; Collectors of Customs at Calcutta, Bombay, Madras, Rangoon and Karachi, and the Deputy Director-General of Telegraphic Traffic, and Directors, Telegraph Engineering.

67. Directors of Public Instruction, Inspectors-General of Police and Prisons under Local Administrations; Comptrollers and Deputy Auditors-General and Deputy Director, Criminal Intelligence.

68. Managers of State Railways other than the North-Western Railway; and Chairmen of Port Trusts, Bombay, Calcutta, Madras and Rangoon.

69. Vice-Chairman of the Port Trusts, Calcutta; Directors of Traffic and Construction and Directors of Telegraphs, 1st Class Indian Telegraph Department, Examiners of Accounts, Public Works Department, first class Officers of the Superior Revenue Establishment of State Railways, first class, first grade Superintending Engineers, Public Works Department, first class; Superintendents of the Survey of India Department, first grade; Director of Telegraphs, first class and Electrical Engineer-in-Chief, Telegraph Department; the Chief Examiners of Accounts, North Western State Railway, Eastern Bengal State Railway and Oudh and Rohilkhand State Railway.

70. Inspectors-General of Registration and rectors of Land Records and Agriculture, under Local Governments; Excise Commissioners under Local Governments and Registrars of Co-operative Credit Societies under Local Governments and Comptroller of Patents.

71. Senior Chaplains other than those readily specified.

72. Sheriffs within their own charges.

73. Officers in the Second Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service, and District Judges in Lower Burma and the Judge of the Small Cause Court, Rangoon, when without their respective charges and the Consulting Surveyor to the Government of Bombay.

FOURTH CLASS.

74. Members of the Indian Civil Service of long years' standing, and Majors and Vice-Consuls.

75. Lieutenants of over 8 years' standing, and Chief Engineers of the Royal Indian Marine.

76. Government Solicitors.

77. Inspectors-General of Registration; Sanitary Commissioners; and Directors of Land Records and Agriculture under Local Administrations; Registrars of Co-operative Credit Societies and Excise Commissioner under Local Administration.

78. Officers in the Third Class Graded List of Civil Offices not reserved for Members of the Indian Civil Service.

The entries in the above table apply exclusively to the persons entered therein, and, while regulating their relative precedence with each other, do not apply to the non-official community resident in India, the members of which will take their place according to usage.

Officers in the above table will take precedence in order of the numbers of the entries. Those

included in one number will take precedence *inter se* according to the date of entry into that number.

When an officer holds more than one position in the table, he will be entitled to the highest position accorded to him.

Officers who are temporarily officiating in any number in the table will rank in that number below permanent incumbents.

All officers not mentioned in the above table, whose rank is regulated by comparison with rank in the army, to have the same rank with reference to civil servants as is enjoyed by Military Officers of equal grades.

All other persons who may not be mentioned in this table, to take rank according to general usage, which is to be explained and determined by the Governor-General in Council in case any question shall arise.

Nothing in the foregoing Rules to disturb the existing practice relating to precedence at Native Courts, or on occasions of intercourse with Natives, and the Governor-General in Council to be empowered to make rules for such occasions in case any dispute shall arise.

All ladies to take place according to the rank herein assigned to their respective husbands, with the exception of wives of Peers, and of ladies having precedence in England independently of their husbands, and who are not in rank below the daughters of Barons; such ladies to take place according to their several ranks, with reference to such precedence in England, immediately after the wives of Members of the Council of the Governor-General.

Given at Our Court at Windsor this tenth day of December, in the year of Our Lord One thousand eight hundred and ninety-eight, and in the sixty-second year of Our Reign.

By Her Majesty's Command.

(Signed) GEORGE HAMILTON.

Supplementary Graded List of Civil Offices not Reserved for Members of the Indian Civil Service prepared under the orders of the Governor-General in Council.

*FIRST CLASS—(No. 55 of the Warrant).

Assay Master of the Mint, Calcutta and Bombay.

Chief Judges of Presidency Courts of Small Causes.

Commissioners of Police, Calcutta, Madras, Bombay, and Rangoon.

Controller of Printing and Stationery.

Deputy Comptroller-General.

Director-General of Archaeology.

Director of the Botanical Survey of India.

Inspector-General of Agriculture in India.

Assessors of the Mint, Calcutta and Bombay.

Meteorological Reporter to the Government of India.

Superintendent of Revenue Survey, Madras.

Superintendent, Trigonometrical Surveys.

*SECOND CLASS—(No. 73 of the Warrant).

Adviser on Chinese Affairs in Burma.

Agent General in India for the British Protectorates in Africa under the Administration of the Foreign Office.

Chief Collector of Customs, Burma.

Chief Constructor of the Royal Indian Marine Dockyard at Bombay.

Chief Inspector of Mines in India.

Chief Presidency Magistrates.

Chief Superintendents of the Telegraph Department.

Collector of Customs and Salt Revenue, Sind.

Collectors and Magistrates of Districts; and Deputy Commissioners of Districts and of Settlements.

Conservators of Forests, 2nd and 3rd Grades.

* The entries in each class are arranged in alphabetical order.

Deputy Accountants-General under Local Governments.

Deputy Director of Telegraphs.

Deputy Inspectors-General of Police.

Deputy Superintendent of Port Blair.

Director of Statistics.

Director of Survey, Madras.

Directors of the Persian Gulf Section; and of the Persian Section of the Indo-European Telegraph Department.

Directors of Telegraphs, 2nd, 3rd and 4th Classes.

Divisional and District and Sessions Judges.

Divisional Controllers of Military Accounts.

Electrical Adviser to the Government of India.

Examiners of Accounts; Public Works Department, 2nd and 3rd Classes.

Government Astronomer, Madras.

Imperial Bacteriologist.

Inspector of Mines to the Government of India.

Judicial Commissioner. Chota Nagpur.

Librarian, Imperial Library.

Officer in charge of the Records of the Government of India.

Officers of the Indian Agriculture Service or of the General List of the Indian Finance Department, or of the Superior Revenue establishment of State Railways, or of the Civil Veterinary, Forest, Survey, Mines, Postal, Telegraph, Customs or Scientific Departments, or officers of the Indian Institute of Science, or Sanitary Engineers not being Superintending Engineers or Consulting Architects to Local Governments drawing Rs. 1,250 a month and upwards.

Officers of the Indian Educational Service, and of the graded Educational Service drawing Rs. 1,250 a month and upwards.

Officers of the Police Department drawing Rs. 1,250 a month and upwards.

Officers of the Public Works Engineer establishment of 19 years' standing who hold the rank of Executive Engineer.

Officers of the Superior Revenue Establishment of State Railways, 1st Class, 2nd and 3rd Grades.

Principals of Government Colleges.

Principal of the Mayo College, Ajmere.

Principal of the Rajkumar College, Rajkot.

Reporter on Economic Products.

Secretary to the Bengal Legislative Council and Assistant Secretary to the Government of Bengal in the Legislative Department.

Superintendent of the Royal Botanical Gardens, Calcutta.

Superintendents, Geological Survey of India.

Superintendents of Revenue Survey and Assessment, Bombay.

Superintendents of the Survey of India Department, 2nd Grade.

Superintending Engineers, Public Works Department, 2nd and 3rd Classes.

Under Secretaries to the Government of India.

*THIRD CLASS—(No. 78 of the Warrant).

Agricultural Chemist.

Assistant Commissioners, Northern India Salt Revenue, drawing Rs. 800 a month and upwards.

Assistant Directors of Dairy Farms.

Assistant Inspector-General of Forests.

Assistant Secretaries to the Government of India.

Chemical Examiner for Customs and Excise.

Collector of Income-Tax, Calcutta.

Collector of Stamp Revenue, Superintendent of Excise Revenue, and Deputy Collector of Land Revenue, Calcutta.

Commander of the steamer employed in the Persian Gulf Section of the Indo-European Telegraph Department.

Constructor of the Royal Indian Marine, Dockyards at Bombay and Kidderpore.

Deputy Administrator-General, Bengal.

Deputy Collector of Salt Revenue, Bombay.

Deputy Commissioner of Northern India, Salt Revenue.

Deputy Commissioners of Police, Calcutta and Bombay.

Deputy Commissioner of Salt, Abkari and Customs Department, Madras.

Deputy Conservators of Forests drawing Rs. 800 a month and upwards.

Deputy Directors of Land Records and Agriculture, Madras and Burma.

Deputy Director of the Imperial Forest School, Dehra Dun.

Deputy Directors of Revenue Settlements and Deputy Superintendents of Revenue Surveys, Madras.

Deputy Postmasters-General of the 1st, 2nd and 3rd grades.

Deputy Superintendents, Geological Survey of India.

Deputy Superintendents, Survey of India Department.

Director, Vaccine Institute, Belgaum.

District Superintendents of Police drawing Rs. 800 a month and upwards.

Engineer and Electrician of the Persian Gulf Section of the Indo-European Telegraph Department.

Examiners of Accounts; Public Works Department. 4th class, 1st and 2nd grades.

Executive Engineers, Public Works Department, 1st and 2nd grades.

First Assistant Superintendent, Port Blair.

Inspector-General of Railway Mail Service.

Judge of the City Civil Court, Madras.

Judges of Presidency Courts of Small Cause and First Judge of the Small Cause Court Rangoon.

* The entries in each class are arranged in alphabetical order.

Legal Assistant in the Legislative Department of the Government of India.

Officers of the Archaeological Department, drawing Rs. 800 a month and upwards.

Officers of the Excise and Salt Departments drawing Rs. 800 a month and upwards.

Officers of the General List of the Indian Finance Department or officers of the higher branch of the Military Accounts Department, or of the Superior Revenue Establishment of State Railways, or of the Civil Veterinary, Forest, Survey, Police, Mines, Customs, or Scientific Departments drawing Rs. 900 a month and upwards.

Officers of the Indian Educational Service and of the Graded Educational Service drawing less than Rs. 1,250 a month but more than Rs. 1,000 a month.

Officers of the Indian Educational Service and the Graded Education Service, or of the Indian Agricultural Service, or Sanitary Engineers, or Consulting Architects, or Electrical Inspectors drawing Rs. 1,000 a month. and upwards.

Officers of the Public Works Engineer Establishment of 12 years, standing who hold the rank of Executive Engineer.

Officers of the Provincial Services of not less than 18 years, standing, drawing Rs. 600 a month and upwards.

Officers of Superior Revenue Establishments of the State Railways, 2nd class, 1st and 2nd grades.

Officers of the Postal and Telegraph Department drawing Rs. 800 a month and upwards.

Paleontologist, Geological Survey of India.

Presidency Magistrates.

Principals of Government Colleges.

Protector of Emigrants and Superintendent of Emigration, Calcutta.

Public Prosecutor in Sind.

Registrar to the Chief Court, Lower Burma, and Secretary to the Board of Revenue in the Department of Revenue, Settlement, Survey, Land Records and Agriculture, Madras, when a member of the Provincial Civil Service.

Registrars to the High Courts and to the Chief Court, Punjab.

Sub-Deputy Opium Agents drawing Rs. 800 a month and upwards.

Superintendent of the Indian Museum.

Superintendent of Land Records and Agriculture in Sind.

Superintendents of Stamps and Stationery.

Superintendents, Telegraph Department, 1st and 2nd Grades.

SALUTES.

The following is the official table of salutes in Indian Territories—a term which includes all the waters of India within three miles of the coast. "Indian seas," within which some of the salutes are to be given, extend from the North-West entrance of the Straits of Malacca to Cape Comorin, excepting Ceylon, and from Cape Comorin to Aden, including the Maldivé and Laccadive Islands, and the Persian Gulf.

Persons.	No. of Guns.
Imperial Salute	101
The King and Emperor when present in person	101
Members of the Royal Family	31
Royal Standard and Royal Salute	31
Royal Salute—On the Anniversaries of the Birth, Accession and Coronation of the Reigning Sovereign; the Birthday of the Consort of the Reigning Sovereign; the Birthday of the Queen-Mother; Proclamation Day	31
Viceroy and Governor-General in India.	31
Independent Asiatic Sovereigns	21
Other Foreign Sovereigns	21
Members of their Families and their Standards	21
Ambassadors	19
Governors of Presidencies	17
The President of the Council of India.. .. .	17
Governor-General of Portuguese Settlements in India	17
Governor of Pondicherry	17
Governors of His Majesty's Colonies	17
Lieutenant-Governors of Provinces in India	15
Commander-in-Chief in India (If a Field Marshal)	19
Commander-in-Chief in India (If a General)	17
Commander-in-Chief of His Majesty's Naval Forces .. .. .	.. .. .
Generals and Admirals, or their Flags	15
Members of the Viceroy's Council	15
Plenipotentiaries and Envoys	15
Lieut.-Governors of His Majesty's Colonies	15
Vice-Admirals, Lieut.-Generals, or their Flags	13
Agents to the Viceroy and Governor-General	13
Agent to the Governor of Bombay in Kathiawar	13
Residents	13
Chief Commissioners of Provinces, and Commissioner of Sind	13
Members of the Executive Council of a Local Government	13
Rear-Admirals and Major-Generals, or their Flags	11

Persons.	No. of Guns.
Political Agents and Charges d'Affaires ..	11
Commodores of the first-class, and Brigadier-Generals	9
The Portuguese Governor of Damaun ..	9
The Governor of Diu	9
Return salutes to Foreign Men-of-war ..	..
Return salutes to Captains of the Navy, and Naval Officers of inferior rank ..	1

Permanent Salutes to Chiefs.

Salutes of 21 guns.

Baroda. The Maharaja (Gaekwar) of.
Gwalior. The Maharaja (Scindia) of.
Hyderahad. The Nizam of.
Mysore. The Maharaja of.

Salutes of 19 guns.

Bhopal. The Begam (or Nawab) of.
Indore. The Maharaja (Holkar) of.
Jammu and Kashmir. The Maharaja of.
Kalat. The Khan (Wali) of.
Kolhapur. The Maharaja of.
Udaipur (Mewar). The Maharana of.
Travancore. The Maharaja of.

Salutes of 17 guns.

Bahawalpur. The Nawab of.
Bharatpur. The Maharaja of.
Bikaner. The Maharaja of.
Bundi. The Maharao Raja of.
Cochin. The Raja of.
Cutch. The Maharao of.
Jaipur. The Maharaja of.
Jodhpur (Marwar). The Maharaja of.
Karauli. The Maharaja of.
Kotah. The Maharao of.
Patiala. The Maharaja of.
Rewa. The Maharaja of.
Tonk. The Nawab of.

Salutes of 15 guns.

Alwar. The Maharaja of.
Banswara. The Maharawal of.
Bhutan. The Maharaja of.
Datia. The Maharaja of.
Dewas (Senior Branch). The Maharaja of.
Dewas (Junior Branch). The Maharaja of.
Dhar. The Maharaja of.
Dholpur. The Maharaj Rana of.
Dungarpur. The Maharawal of.
Idar. The Maharaja of.
Jaisalmer. The Maharawal of.
Khairpur. The Mir of.
Kishangarh. The Maharaja of.

Orchha. The Maharaja of.
Partabgarh. The Maharawat of.
Sikkim. The Maharaja of.
Sirohi. The Maharao of.

Salutes of 13 guns.

Benares. The Maharaja of.
Bhavnagar. The Maharaja of.
Cooch Behar. The Maharaja of.
Dhrangadhra. The Maharaja of.
Jaora. The Nawab of.
Jind. The Maharaja of.
Junagadh (or Junagarh). The Nawab of.
Kapurthala. The Maharaja of.
Navanagar (or Nawanagar). The Maharaja of.
Porbandar. The Maharaja of.
Rampur. The Nawab of.
Ratlam. The Raja of.
Tippera. The Raja of.

Salutes of 11 guns.

Ajaigarh. The Maharaja of.
Baoni. The Nawab of.
Bijawar. The Maharaja of.
Cambay. The Nawab of.
Chamba. The Raja of.
Charkhari. The Maharaja of.
Chhatarpur. The Raja of.
Faridkot. The Raja of.
Gondal. The Thakur Saheb of.
Janjira. The Nawab of.
Jhabua. The Raja of.
Jhalawar. The Maharaja-Rana of.
Kahlur (Bilaspur). The Raja of.
Maler Kotla. The Nawab of.
Mandi. The Raja of.
Manipur. The Maharaja of.
Morvi. The Thakur Saheb of.
Nabha. The Maharaja of.
Narsingharh. The Raja of.
Palanpur. The Nawab of.
Panna. The Maharaja of.
Pudukkottai (or Puddukottai). The Raja of.
Radhanpur. The Nawab of.
Rajgarh. The Raja of.
Rajpipla. The Raja of.
Sailana. The Raja of.
Samthar. The Raja of.
Sirmur (Nahan). The Maharaja of.
Sitamau. The Raja of.
Suket. The Raja of.
Tehri (Garhwal). The Raja of.

Salutes of 9 guns.

Alirajpur. The Raja of.
Balasinor (or Vadasinor). The Nawab (Babi) of.
Bansda. The Raja of.

Baraundha. The Raja of.
 Bariya. The Raja of.
 Barwani. The Rana of.
 Chhota Udepur (or Mohan). The Raja of.
 Dharampur. The Raja of.
 Dhrol. The Thakur Saheb of.
 Fadthli (Shukra). The Sultan of.
 Hispaw (or Thibaw). The Sawbwa of.
 Karond (Kalahandi). The Raja of.
 Kengtung (or Kyaington). The Sawbwa of.
 Khilchipur. The Rao Bahadur of.
 Kishn and Socotra. The Sultan of.
 Lahej (or Al Hauta). The Sultan of.
 Limri. The Thakor Saheb of.
 Loharu. The Nawab of.
 Lunawara (or Lunawada). The Raja of.
 Malbar. The Raja of.
 Mayurbhanj. The Maharaja of.
 Mong Nai. The Sawbwa of.
 Mudhol. The Chief of.
 Nagod. The Raja of.
 Palitana. The Thakor Saheb of.
 Patna. The Maharaja of.
 Rajkot. The Thakor Saheb of.
 Sachin. The Nawab of.
 Sangli. The Chief of.
 Savantvadi. The Sar Desai of.
 Shehr and Mokalla. The Sultan of.
 Sonpur. The Raja of.
 Sunth. The Raja of.
 Vankaner (or Wankaner). The Raj Saheb of.
 Wadhwan (or Vadwan). The Thakor Saheb of.
 Yawnghe (or Nyaunggywe). The Sawbwa of.

Personal Salutes.

Salutes of 21 guns.

Jaipur. Honorary Major-General His Highness Maharajadhiraja Sir Sawai Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., G.B.E., LL.D., Maharaja of.
 Jammu and Kashmir. Honorary Lieutenant-General His Highness Maharaja Sir Pratap Singh, G.C.S.I., G.C.I.E., G.B.E., Maharaja of.
 Kalat. His Highness Mir Sir Mahmud Khan, G.C.I.E., Wali of.
 Kolhapur. Honorary Colonel His Highness Sir Shahu Chhatrapati Maharaj, G.C.S.I., G.C.I.E., G.C.V.O., LL.D., Maharaja of.
 Travancore. His Highness Sri Maharaja Raja Sir Bala Rama Varma Bahadur, G.C.S.I., G.C.I.E., Maharaja of.
 Udaipur (Mewar). His Highness Maharajadhiraja Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., Maharana of.

Salutes of 19 guns.

Bikaner. Honorary Major-General His Highness Maharaja Sir Ganga Singh Bahadur, G.C.S.I., G.C.I.E., K.C.B., A.D.C., Maharaja of.

Mysore. Her Highness Maharani Kempa Nanjammanni Avaru Vanivilas Sannidhana, C.I., Maharani of.

Nepal. Honorary Lieut.-General His Excellency Maharaja Sir Chandra Shumshere Jung Bahadur, Rana, G.C.B., G.C.S.I., G.C.V.O., D.C.L., Prime Minister, Marshal of.

Patiala. Honorary Major-General His Highness Maharajadhiraja Sir Bhupendar Singh Mahindar Bahadur, G.C.I.E., G.B.E., Maharaja of.

Salutes of 17 guns.

Jodhpur. Honorary Lieut.-General His Highness Maharaja Bahadur Sir Pratap Singh, G.C.B., G.C.S.I., G.C.V.O., A.D.C., late Regent of.

Orchha. His Highness Maharaja Mahindra Sawai Sir Partap Singh Bahadur, G.C.S.I., G.C.I.E., Maharaja of.

Sirohi. His Highness Maharajadhiraja Maharao Sir Kesri Singh Bahadur, G.C.I.E., K.C.S.I., Maharao of.

Salutes of 15 guns.

Benares. His Highness Maharaja Sir Parbhu Narayan Singh Bahadur, G.C.I.E., Maharaja of.

Bhavnagar. His Highness Krishna Kumarsinhji Maharaja of.

Jind. Honorary Lieutenant-Colonel His Highness Maharaja Sir Ranbir Singh, Rajendra Bahadur, G.C.I.E., K.C.S.I., Maharaja of.

Junagadh (or Junagarh). His Highness Vali Ahad Mohabat Khanji, Rasulkhanji, Nawab of.

Kapurthala. Honorary Lieutenant-Colonel His Highness Maharaja Sir Jagatjit Singh Bahadur, G.C.S.I., Maharaja of.

Navanagar (or Nawanagar). Honorary Lieutenant-Colonel His Highness Maharaja Shri Sir Ranjitsinhji Vibhaji, K.C.S.I., Maharaja of.

Rampur. Honorary Colonel His Highness Nawab Sir Muhammad Hamid Ali Khan, Bahadur, G.C.I.E., G.C.V.O., A.D.C., Nawab of.

Salute of 13 guns.

Janjira. His Highness Sidi Sir Ahmad Khan Sidi Ibrahim Khan, G.C.I.E., Nawab of.

Salutes of 11 guns.

Barwani. His Highness Rana Sir Ranjit Singh, Rana of.

Bhor. His Highness Meherban Shanker Rav Chimnaji, Pant Sachiv of.

His Highness Aga Sir Sultan Muhammad Shah Aga Khan, G.C.S.I., G.C.I.E., of Bombay.

Sachin. Honorary Captain His Highness Nawab Sidi Ibrahim Mohamed Yakub Khan, Nawab of.

Shehr and Mokalla. His Highness Sultan Sir Ghalib bin Awadth Al-Kayti, K.C.I.E., Sultan of.

Vankaner (or Wankaner). Honorary Captain Raj Saheb Sir Amarsinhji Banesinhji, K.C.I.E., Raj Saheb of.

Salutes of 9 guns.

Danta. Maharana Shri Hamirsinhji Jaswatsinhji, Maharana of.

Dthala. Amir Nasr bin Shaif bin Sef bin Abdul Hadi, Amir of.

Jamkhindi. Honorary Captain Meherban Sir Parashrainav Ranechandrav, K.C.I.E., Chief of.

Kanker. Maharajadhiraja Kanai Deo, Chief of. Las Bela. Mir Kamal Khan, C.I.E., Jam of.

Tawngpeng. H. Kun Hsang Awn, K. S. M., Sawbwa of.

Local Salutes.

Salutes of 21 guns.

Bhopal. The Bezam (or Nawab of). Within the limits of her (or his) own territories, permanently.

Indore. The Maharaja (Holkar) of. Within the limits of his own territories, permanently.

Jammu and Kashmir. The Maharaja of. Within the limits of his own territories, permanently.

Salutes of 13 guns.

His Excellency the Governor of Bushire. At the termination of an official visit.

Salutes of 12 guns.

His Excellency Shaikh Sir Khaz'al Khan, G.C.I.E., K.C.S.I., Shaikh of Muhammerah. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Salute of 11 guns.

His Excellency Shaikh Isa bin Ali al Khalifah, C.S.I., Shaikh of Bahrain. Fired by British Ships of War in the Persian Gulf on the termination of an official visit by this Chief.

Salutes of 5 guns.

The Shaikh of Kuwait. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Bahrain. Fired by British Ships of War in the Persian Gulf after the termination of an official visit by this Chief.

The Shaikh of Abu Dhabi. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Eldest son of the Shaikh of Muhammerah. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

Eldest son of the Shaikh of Kuwait. Fired on occasions when he visits one of His Majesty's Ships as his father's representative.

The Governor of Muhammerah. At the termination of an official visit.

The Governor of Bunder Abbas. At the termination of an official visit.

The Governor of Lingah. At the termination of an official visit.

Salutes of 3 guns.

The Shaikh of Dibai. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Shargah. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Ajman. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Umm-ul-Qaiwain. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

The Shaikh of Ras-al-Kheima. Fired by British Ships of War in the Persian Gulf at the termination of an official visit by this Chief.

Eldest son of the Shaikh of Bahrain. Fired on occasion when he visits one of His Majesty's Ships as his father's representative.

SALARIES OF CHIEF OFFICERS.

The following are the tables of salaries sanctioned for the Chief Officers of the Administration of India. The tables are liable to variation, and it should be noted that the pay of members of the Indian Civil Service is subject to a deduction of 4 per cent. for subscription towards annuity :—

	Pay per Annum Rs.
Viceroy and Governor-General	25,000
Private Secretary to Viceroy	27,000
Military Secretary and Aide-de-Camp to Viceroy	18,000
Commander-in-Chief of the Forces in India	1,00,000
Military Secretary to Commander-in-Chief in India	18,000
Members (6) of the Governor-General's Council	80,000
President, Railway Board	60,000
Member, Railway Board	48,000
Secretaries to the Government of India in the Army and Public Works and Legislative Departments	42,000
Secretaries to the Government of India in the Finance, Foreign, Home, Revenue and Agriculture, Commerce and Industry and Education Departments	48,000
Educational Commissioner	33,000 to 36,000
Comptroller and Auditor-General	54,000
Controller of Currency	36,000 to 42,000

	Pay per Annum. Rs.
2 Accountants-General, Class I	33,000
3 " " " II	30,000
4 " " " III	27,000
1 Commissioner of Excise and Salt	30,000
1 Director-General of Posts and Telegraphs	42,000 to 48,000
2 Postmasters-General	30,000
2 " " "	27,000
3 " " "	24,000
3 " " "	21,000
1 Director, Geological Survey of India	24,000
Deputy Secretaries to the Government of India in the Finance and Foreign Depart- ments	27,000
Deputy Secretaries to the Government of India in the Legislative and Home De- partments	24,000
Superintendent of Port Blair	30,000 to 36,000
1 Chief Commissioner of Delhi	36,000
1 Director, Criminal Intelligence	36,000
1 Deputy Director, Criminal Intelligence	18,000 to 24,000
Inspector-General of Forests	31,800
Surveyor-General, Survey of India	36,000
1 Chief Inspector of Mines in India	21,000 to 24,200
1 Director-General, Indian Medical Service	36,000
1 Director-General of Archæology in India	20,400
1 Director-General of Commercial Intelligence	24,000
Controller of Stationery and Printing	18,000 to 27,000
Governors of Madras, Bombay, and Bengal	1,28,000
Private Secretaries to Governors of Madras, Bombay, and Bengal	18,000
Surgeons to Governors of Madras, Bombay, and Bengal	12,000
Military Secretary and Aide-de-Camp to Governors of Madras, Bombay, and Bengal	12,000
Bishop of Calcutta	45,975
Bishop of Madras	25,600
Bishop of Bombay	25,600
Chief Justice of Bengal	72,000
Chief Justices of Madras, Bombay, and the United Provinces of Agra and Oudh	60,000
Puisne Judges of the High Courts of Calcutta (15), Madras (6), Bombay (6), and the United Provinces (6)	48,000
Chief Judge of the Chief Court, Punjab	48,000
Burma	48,000
Judges of the "Chief Court," Punjab (4), and Burma (4), except Chief Judges	42,000
7 Political Residents, 1st class	48,000
8 " " 2nd class	33,000
Political Officers on time scale	5,400 to 28,800

Provincial Salaries.

N.B.—Acting and other allowances are not included in the salaries shown.

Bengal.

Governor	1,20,000
3 Members of Council	64,000
1 Member of the Board of Revenue	45,000
5 Commissioners of Divisions	35,000
1 Chief Secretary to Government	45,000
3 Secretaries to Government	33,000
3 Under Secretaries to Government	12,000
1 Excise Commissioner	24,000
1 Chairman of Corporation of Calcutta	30,000
1 Deputy ditto	12,000 to 18,000
11 Collector of Customs, Calcutta	24,000
12 Magistrates and Collectors, 1st grade	27,000
3 " " 2nd "	21,600
4 " " 3rd "	18,000

[illegible]

Bihar and Orissa.

	1	Lieutenant Governor	1,00,000
	3	Members of the Executive Council	60,000
	1	Member of the Board of Revenue	42,000
	1	Chief Secretary to Government	36,000
	2	Secretaries to Government	27,000
	3	Under Secretaries to Government	12,000
	5	Commissioners	35,000
	10	Magistrates and Collectors, 1st grade	27,000
	11	" " 2nd "	21,600
	12	" " 3rd "	18,000
	11	Joint Magistrates and Deputy Collectors, 1st grade	10,800
	11	" " 2nd "	8,400
	-	Assistant Magistrates and Collectors	4,800 to 6,000
	2	District and Sessions Judges, 1st grade	36,000
	5	" " 2nd "	30,000
	7	" " 3rd "	24,000
	1	Commissioner of Excise and Salt	17,280
	1	Director of Land Records and Surveys	21,600
	1	Director of Agriculture	18,000
	1	Inspector-General of Police	30,000 to 36,000
	1	Director of Public Instruction	24,000

Assam.

1	Chief Commissioner	.. .. .	60,000
2	Commissioners	.. .. .	33,000
2	Secretaries to Chief Commissioner	.. .. .	21,600
6	Deputy Commissioners, 1st grade	.. .. .	27,000 and 27,000
7	" " 2nd "	.. .. .	21,600
7	" " 3rd "	.. .. .	18,000
4	Assistant " 1st "	.. .. .	10,800
4	" " 2nd "	.. .. .	8,400
-	" " 3rd "	.. .. .	5,400 to 6,000
2	Under Secretaries to Chief Commissioner:	.. .. .	12,000
1	Inspector-General of Police	.. .. .	27,000
1	Director of Public Instruction	.. .. .	15,000 to 18,000
1	Director of Land Records and Agriculture	.. .. .	21,600
1	Excise Commissioner	.. .. .	21,600

Pay per
Annum.
Rs.

United Provinces of Agra and Oudh.

1	Lieutenant Governor	..	..	..	..	..	..	1,00,000
1	Chief Secretary to Government	..	..	..	..	..	..	36,000
2	Members of the Board of Revenue	..	..	..	..	..	..	42,000
2	Secretaries to Government	..	..	..	..	..	20,000 and	22,000
1	Secretary to Board of Revenue	..	..	..	..	..	..	27,000
3	Under Secretaries to Government	..	..	..	..	..	15,600, 12,000, and	12,000
9	Commissioners of Divisions	..	..	..	..	..	..	35,000
1	Commissioner for Kumaon	..	..	..	..	..	..	30,000
1	Opium Agent	..	..	..	..	..	30,000 to	36,000
19	Magistrates and Collectors, 1st grade	..	..	..	..	..	..	27,000
17	„ „ 2nd	..	..	..	..	..	..	22,000
4	Deputy Commissioners, 1st grade	..	..	..	..	..	..	22,000
16	„ „ 2nd „	..	..	..	..	..	..	20,000
14	Joint Magistrates, 1st grade	..	..	..	..	..	..	12,000
8	Assistant Commissioners, 1st grade	..	..	..	..	..	..	9,600
21	Joint Magistrates and Assistant Commissioners, 2nd grade	..	..	..	..	..	..	8,400
-	Assistant „ „ „	..	..	..	..	..	4,800 to	6,000
3	Deputy Commissioners for Kumaon	..	..	..	..	..	12,000, 12,000 and	18,000
1	City Magistrate, Lucknow..	..	..	..	..	..	..	12,000
1	Superintendent, Dehra Dun	..	..	..	..	..	..	18,000
1	Judicial Commissioner	..	..	..	..	..	..	42,000
2	Additional Judicial Commissioners	..	..	..	..	..	38,000 and	40,000
2	District and Sessions Judges, 1st grade	..	..	..	..	..	..	36,000
6	„ „ 2nd „	..	..	..	..	..	..	30,000
7	„ „ 3rd „	..	..	..	..	..	..	27,000
10	„ „ 4th „	..	..	..	..	..	..	22,000
5	„ „ 5th „	..	..	..	..	..	..	20,000
1	Registrar, High Court	..	..	..	..	..	..	19,200
1	Inspector-General of Police	..	..	..	..	..	30,000 to	36,000
1	Director of Public Instruction	..	..	..	..	..	..	24,000

Punjab.

1	Lieutenant Governor	..	..	..	..	..	..	1,00,000
1	Chief Secretary to Government	..	..	..	..	..	..	36,000
3	Secretaries to Government	..	..	..	..	..	18,000, 18,000 and	21,600
3	Under Secretaries to Government	..	..	..	..	..	9,600, 12,000 and	12,000
1	Under Secretary, Police Department, and Inspector-General of Police	..	..	..	..	..	..	33,600
1	Under Secretary, Educational Department	..	..	..	..	..	..	21,000
2	Financial Commissioners	..	..	..	..	..	..	42,000
2	Secretaries to Financial Commissioner	..	..	..	..	..	12,000 and	15,600
5	Commissioners	..	..	..	..	..	..	33,000
14	Deputy Commissioners, 1st grade	..	..	..	..	..	..	27,000
14	„ „ 2nd „	..	..	..	..	..	..	21,600
14	„ „ 3rd „	..	..	..	..	..	..	18,000
14	Assistant Commissioners, 1st grade	..	..	..	..	..	..	10,800
14	„ „ 2nd „	..	..	..	..	..	..	8,400
2	„ „ 3rd „	..	..	..	..	..	..	6,000
2	Divisional Judges, 1st grade	..	..	..	..	..	..	33,000
4	„ „ 2nd „	..	..	..	..	..	..	30,000
7	„ „ 3rd „	..	..	..	..	..	..	27,000
10	„ „ 4th „	..	..	..	..	..	..	21,600
1	Sub-Judge and Judge, Small Cause Court, Simla	..	..	..	..	..	..	15,000
1	Registrar and the Chief Court	..	..	..	..	..	..	15,000
1	Legal Remembrancer	..	..	..	..	..	..	27,000
1	Inspector-General of Police	..	..	..	..	..	..	24,000
1	Director of Public Instruction	..	..	..	..	..	..	21,600

Madras—contd.										Pay per Annum.
										Rs.
1	Secretary to Commissioners of Land Revenues	..	..	..	..	..	..	18,000	to	21,600
1	Secretary to the Commissioners of Salt, &c.	..	..	..	..	..	..	18,000	to	21,600
22	District and Sessions Judges	..	..	..	..	..	..	24,000	to	36,000
1	Registrar, High Court	..	..	..	..	..	..	18,000	to	21,600
1	Advocate General	..	..	..	..	..	..	..	..	21,600
1	Government Solicitor	..	..	..	..	..	..	..	..	13,200
1	Chief Judge, Small Cause Court	..	..	..	..	..	..	..	..	24,000
1	Commissioner of Coorg	..	..	..	..	..	..	..	..	24,000
1	Resident in Travancore	..	..	..	..	..	..	..	..	33,600
1	Inspector-General of Police	..	..	..	..	..	..	30,000	to	36,000
9	Collectors, 1st grade	..	..	..	..	..	..	..	..	30,000
14	" 2nd "	..	..	..	..	..	..	..	..	27,000
1	President, Corporation of Madras	..	..	..	..	..	..	..	..	21,600
6	Collectors, 3rd grade	..	..	..	..	..	..	..	..	21,600
17	Sub-Collectors and Joint Magistrates, 1st grade	..	..	..	..	..	..	..	..	14,400
16	" " " 2nd "	..	..	..	..	..	..	..	..	10,800
16	" " " 3rd "	..	..	..	..	..	..	..	..	8,400
-	Assistant Collectors and Magistrates	..	..	..	..	..	..	4,800	to	6,000
1	Director of Public Instruction	..	..	..	..	..	..	24,000	to	30,000

Bombay.

3	Members of Council	..	..	..	..	..	..	..	64,000
1	Chief Secretary to Government	..	..	..	..	..	..	..	45,000
1	Secretary to Government	..	..	..	..	..	..	..	37,500
1	"	..	..	..	..	..	..	..	30,000
1	Private Secretary to Governor	..	..	..	..	..	..	..	18,000
2	Under Secretaries to Government	..	..	..	..	..	..	..	15,000
1	Inspector-General of Prisons	..	..	..	..	..	..	21,600 to	24,000
1	Inspector-General of Police	..	..	..	..	..	..	30,000 to	36,000
4	Commissioners of Divisions, including the Commissioner of Customs	..	..	..	..	..	..	36,000 and	42,000
1	Commissioner in Sind	..	..	..	..	..	..	..	45,000
1	Municipal Commissioner, Bombay	..	..	..	..	..	..	..	30,000
13	Senior Collectors	..	..	..	..	..	..	..	27,900
15	Junior "	..	..	..	..	..	..	..	21,600
9	Assistant Collectors, 1st grade	..	..	..	..	..	..	..	14,400
17	" " 2nd "	..	..	..	..	..	..	..	10,800
18	" " 3rd "	..	..	..	..	..	..	..	8,400
-	" " 4th "	..	..	..	..	..	..	4,800 to	6,000
1	Collector in Sind	..	..	..	..	..	..	..	21,600
1	Assistant Commissioner in Sind	..	..	..	..	..	..	..	13,200
1	Judicial Commissioner in Sind	..	..	..	..	..	..	..	42,000
1	Additional Judicial Commissioner in Sind	..	..	..	..	..	..	..	36,000
2	District and Sessions Judges—1st grade	..	..	..	..	..	..	..	30,000
6	" " 2nd "	..	..	..	..	..	..	..	27,900
11	" " 3rd "	..	..	..	..	..	..	..	21,600
1	Prothonotary and Registrar, High Court	..	..	..	..	..	..	20,400 to	24,000
1	Administrator General and Official Trustee	..	..	..	..	..	..	24,000 to	30,000
1	Registrar, High Court	..	..	..	..	..	..	..	20,400
1	Chief Judge, Small Cause Court	..	..	..	..	..	..	..	24,000
1	Remembrancer of Legal Affairs	..	..	..	..	..	..	..	30,000
1	Government Solicitor	..	..	..	..	..	..	..	30,000
1	Advocate General	..	..	..	..	..	..	..	24,000
1	Agent to the Governor in Kathiawar	..	..	..	..	..	..	..	36,000
1	Resident and Senior Political Agent	..	..	..	..	..	..	..	27,000
26	Political Officers on time scale of pay	..	..	..	..	5,400 to	10,200 &	11,400 to	23,400
1	Director of Public Instruction	..	..	..	..	..	..	24,000 to	30,000

Industries Commission.

A resolution issued by the Government of India in May, 1916, announced the appointment of a Commission to examine and report upon the possibilities of further industrial development in India and to submit its recommendations with special reference to the following questions:—(a) Whether new openings for the profitable employment of Indian capital in commerce and industry can be indicated; (b) Whether and if so in what manner Government can usefully give direct encouragement to the industrial development; (1) By rendering technical advice more freely available; (2) by the demonstration of the practical possibility on a commercial scale of particular industries; (3) by affording directly or indirectly financial assistance to industrial enterprises, or (4) by any other means which are not incompatible with the existing fiscal policy of the Government of India.

Subjects Excluded.—The original Resolution expressly directed that certain matters should be excluded from consideration. In framing the terms of reference, said the Resolution, it has been found necessary to exclude two matters from the scope of the Commission's labours. In the first place any consideration of the present fiscal policy of the Government of India has been excluded from its enquiries. In the next place it was not proposed that the Commission should re-examine those aspects of technical and industrial education which have recently been dealt with by a committee working in England and India, whose reports are at present under the consideration of the Government of India.

Personnel.—The Commission, as originally appointed, consisted of the following gentlemen: President Sir T. H. Holland. Members:—Mr. Chatterton, Sir Fazulbhoj Currimbhoy Ebrahim, Mr. E. Hopkinson, Mr. C. E. Low, C.S., Pandit Madan Mohan Malaviya, Sir R. N. Mukerjee, the Rt. Hon. Sir Horace Plunkett, Mr. F. H. Stewart and Sir D. J. Tata.

Sir Horace Plunkett was unable to serve on account of ill-health.

Mr. E. Hopkinson was compelled for the same reason to retire.

The commission met in October 1916 and proceeded on tour, but in February 1917, the appointment of Sir Thomas Holland to the presidency of the newly constituted Indian Munitions Board necessitated an interruption of the Commission's work for some months. The tour was resumed in November, 1917. Sir Thomas Holland presided over the opening session in Bombay, after which he left the Commission and returned to his duties on the Munitions Board. The presidency of the commission was assumed by Sir Rajendranath Mukerji.

The Report.

The Report of the Commission, which was issued in October 1918, is summarised:—

It is important to note that the constructive proposals depend on the acceptance of two principles:—(1) that in future Government must play an active part in the industrial development of the country, with the aim of making

India more self-contained in respect of men and material, and (2) that it is impossible for Government to undertake that part, unless provided with adequate administrative equipment and forearmed with reliable scientific and technical advice.

With these principles in mind, it will be convenient first to glance at the administrative machinery which the Commission proposes and then to examine the work which it is intended to do. The administrative proposals include the creation of imperial and provincial departments of Industries and of an Imperial Industrial Service. The imperial department would be in charge of a member of the Viceroy's Executive Council, assisted by a board of three members entitled the Indian Industries Board and be responsible for the industrial policy of Government and the inauguration and carrying out of a uniform programme of industrial development throughout the country. The actual administrative work would be almost entirely decentralised and would devolve on Local Governments. The performance of these duties would necessitate the employment of a large staff of officers whose qualifications would primarily depend upon a knowledge of mechanical engineering; and the formation of an Imperial Industrial Service is suggested in order to safeguard Government against the dangers and difficulties of casual recruiting. This service would consist mainly of mechanical engineers and engineering technologists the majority of whom would be employed under the Local Governments. The headquarters of the Department and of the Board should be with the Government of India.

The provincial departments would be administered by Directors of Industries, assisted by specialists and technical advisers who would usually be seconded from imperial services for work under the Local Government. A provincial Director would thus be able to develop the industries of his province with the help of competent engineers and scientists. He would be advised by a provincial Board of Industries composed mainly of non-officials and he should hold the post of a secretary to Government to secure expeditious and effective despatch of work.

Future Possibilities.—It now remains to consider the work which this organisation is to carry out and the conditions of India which render essential a policy of active intervention on the part of Government in the industrial affairs of the country. The first chapters of the report deal with India as an industrial country, her present position and her potentialities. They show how little the march of modern industry has affected the great bulk of the Indian population, which remains engrossed in agriculture, winning a bare subsistence from the soil by antiquated methods of cultivation. Such changes as have been wrought in rural areas are the effects of economic rather than of industrial evolution. In certain centres the progress of western industrial methods is discernible; and a number of these are described in order to present a picture of the conditions

under which industries are carried on, attention being drawn to the shortage and to the general inefficiency of Indian labour and to the lack of an indigenous supervising agency. Proposals are made for the better exploitation of the forests and fisheries. In discussing the industrial deficiencies of India, the report shows how unequal the development of our industrial system has been. Money has been invested in commerce rather than industries, and only those industries have been taken up which appeared to offer safe and easy profits. Previous to the war, too ready reliance was placed on imports from overseas, and this habit was fostered by the Government practice of purchasing stores in England. India produces nearly all the raw materials necessary for the requirements of a modern community; but is unable to manufacture many of the articles and materials essential alike in times of peace and war. For instance, her great textile industries are dependent upon supplies of imported machinery and would have to shut down if command of the seas were lost. It is vital, therefore, for Government to ensure the establishment in India of those industries whose absence exposes us to grave danger in event of war. The report advocates the introduction of modern methods of agriculture and in particular of labour-saving machinery. Greater efficiency in cultivation, and in preparing produce for the market would follow, labour now wastefully employed would be set free for industries, and the establishment of shops for the manufacture and repair of machinery would lead to the growth of a huge engineering industry. After examining the resources for generating power, the report says the coal of India is generally of a poor quality and the radius within which it can be economically used is accordingly limited. Moreover, the extension of metallurgical industries already started involves a severe attack on our visible supplies of cooking coal. The Commission recommends a special survey of the coal position in India. The oil fields of Burma are being rapidly drained and no others of equal value have been proved. Wind power is too intermittent for industrial use. Attention should be directed to more economical methods of using wood fuel, and new materials for industrial alcohol should be investigated. The harnessing of water power appears, however, to afford a more reliable source of energy, especially with a view to the development of thermo-electric industries; and Government is urgently enjoined to undertake a hydrographic survey in order to determine the places which offer possibilities for the establishment of hydro-electric installations.

The Indian in Industries.—The next chapters deal with "The Indian in Industries." They discuss measures designed to improve the efficiency of the Indian artisan and to encourage the educated Indian to take part in industrial enterprise. It is shown that the relative lowness of wages paid to Indian labour is counter-balanced by the comparative inefficiency of the individual Indian workman. The Commission assigns three causes for this inefficiency, viz., the absence of education, the prevailing low standard of comfort and the effects of preventable disease. The Commission expressed itself in favour of universal primary

education, but considers that it would be unfair and unjust to impose upon employers this duty, which devolves rather upon the State and local authorities. But education of a technical kind is also required and the method of instruction to be followed will vary for workers in organised and for workers in cottage industries, the latter of whom, it may be remarked, considerably exceed the former in numbers. For cottage industries the Commission proposes an efficient system of education in industrial schools administered by head masters with practical knowledge of the industries taught, and controlled by the Departments of Industries. The extension of marketing facilities must go hand in hand with the teaching of improved processes. In the case of organised industries mechanical engineering is taken as a typical instance, and the proposals include the establishment of a system of organised apprenticeship for a period of four or five years, with practical training in the workshops and theoretical instruction in attached teaching institutions.

The Commission places better housing in the forefront of its recommendations to raise the standard of comfort of the Indian artisan. Subject to certain safeguards, Government should use its powers under the Land Acquisition Act to acquire sites for industrial dwellings, and land so acquired should be leased to employers on easy terms. Special remedies are proposed in the case of Bombay, where the problems of congestion are unique. General measures of welfare work among factory employees are also suggested and special attention should be paid to the improvement of public health. The elimination of such diseases as hookworm and malaria, which are prevalent almost everywhere in India, would add enormously to the productive capacity of the Indian labourer.

The general aversion from industrial pursuits of the educated Indian is ascribed to hereditary predisposition accentuated by an impractical system of education. A complete revolution in the existing methods of training is proposed. For manipulative industries, such as mechanical engineering, an apprenticeship system, similar to that suggested for artisans should be adopted. The youth who aspires to become a foreman or an engineer, must learn to take off his coat at the start and should serve a term of apprenticeship in the workshops, supplemented by courses of theoretical instruction. At the conclusion of this period of training he may be allowed to specialise in particular subjects. For non-manipulative or operative industries, on the other hand, the teaching institution should be the main training ground, though practical experience is also necessary. Special proposals are made for commercial and mining education; and the future establishment of two imperial colleges is adumbrated, one for the highest grade of engineering and the other for metallurgy. To ensure the maintenance of close relations between the training institutions and the world of industry the general control of technical education should be transferred to the Department of Industries.

Government intervention.—The remaining chapters of the report deal more specifically with Government intervention in

industries. Government clung long to the tradition of *laissez faire* in industrial matters; but when in recent years it attempted to play a more active part in industrial development, its efforts were rendered futile by the absence of scientific and technical advice to assist it in estimating the value of industrial propositions, and by the lack of any suitable agency to carry out approved proposals. To remedy the first of these defects, a reorganisation of the existing scientific services is advocated, in such a way as to unite in imperial services, classified according to science subjects, all the scattered workers now engaged in the provinces on isolated tasks. Rules are suggested to govern the relations between the members of these services and private industrialists seeking advice. The situation of research institutes and the conditions and terms of employment of these services are questions for the decision of which the Commission considers that the appointment of a special committee is necessary.

The administrative machinery with which Government must be equipped and some of the functions which that machinery will enable it to perform have already been described; but there are many other directions in which the development of industries can be stimulated. Useful and up-to-date information on commercial and industrial matters is essential both for Government and for private merchants and industrialists. A scheme is propounded for collecting such information and for making it available to the public through officers of the Department of Industries. The purchase of Government stores in the past has been conducted in such a way as to handicap Indian manufactures in competing for orders and to retard industrial development in India. The Commission proposes that the Department of Industries should be in charge of this work and that orders should not be placed with the Stores Department of the India Office until the manufacturing capabilities of India have first been exhausted. A chapter is concerned with the law of land acquisition and enunciates principles in accordance with which Government might compulsorily acquire sites for industrial undertakings; in another, the various methods by which Government might render direct technical aid to industries are explained. The Commission considers that ordinarily Government itself should undertake manufacturing operations only for the production of lethal munitions. The administration of the Boiler Acts, the Mining Rules and the Electricity Act, the employment of jail labour, the prevention of adulteration, patents, and the registration of business names, of trade marks and of partnerships, are matters which are specifically dealt with. In the opinion of the Commission the compulsory registration of partnerships is practicable and the question should be examined by Government with a view to legislation.

Small and Cottage Industries.—Industrial co-operation is discussed with reference to small and cottage industries; and the vexed question of railway rates on industries is considered. The Commission thinks that reduced rates to and from ports have been prejudicial to industrial development and that the position requires careful examination with a view to the removal of existing anomalies.

In particular it should be possible to increase the rates on raw produce for export and on imports other than machinery and stores for industrial use. The addition of a commercial member to the Railway Board and the better representation of commercial and industrial interests at the Railway Conference would help to secure a more equitable system of rating. The improvement of waterways and the formation of a Waterways Trust at Calcutta are also proposed.

The Commission lays emphasis on the disorganisation of Indian capital and its shyness in coming forward for industrial development. There is no lack of money in the country, yet the industrialist cannot obtain the use of it except on terms so exorbitant as to devour a large part of his profits. There is a crying necessity for the extension of banking facilities in the mofussil. The Commission is disposed to favour the establishment of an industrial bank or banks; but it considers that the appointment of an expert committee is necessary to deal with this subject and ask Government to take action at an early date. As an 'interim' measure, a scheme is propounded for the provisions of current finance to middle class industrialists, by which the banks would open cash credits in favour of applicants approved by the Department of Industries on the guarantee of Government. Various other methods of financial assistance by Government are suggested, in particular the provision of plant for small and cottage industries on the hire-purchase system.

Position summed up.—To sum up, the Commission finds that India is a country rich in raw materials and in industrial possibilities, but poor in manufacturing accomplishment. The deficiencies in her industrial system are such as to render her liable to foreign penetration in time of peace and to serious dangers in time of war. Her labour is inefficient, but for this reason capable of vast improvement. She relies almost entirely on foreign sources for foremen and supervisors; and her *intelligentsia* have yet to develop a right tradition of industrialism. Her stores of money lie inert and idle. The necessity of securing the economic safety of the country and the inability of the people to secure it without the co-operation and stimulation of Government impose, therefore, on Government a policy of energetic intervention in industrial affairs, and to discharge the multifarious activities which this policy demands, Government must be provided with a suitable industrial equipment in the form of imperial and provincial departments of Industries.

The recurring cost of the proposals is estimated at Rs. 86 lakhs; they involve a capital expenditure of Rs. 150 lakhs, mainly on educational institutions, and a further capital outlay of Rs. 66 lakhs is anticipated for future developments. The Commission considers that this expenditure may be worked up to at the end of a period of 7 years.

Pandit Malaviya appended a minute of dissent objecting to the appointment of an Industrial Service and recommending the enlistment of the necessary staff for a term of years.

Pending the formal constitution of the Industries Department the work is being carried on by Sir Thomas Holland, President of the Munitions Board.

Indian Orders

The Star of India.

The Order of the Star of India was instituted by Queen Victoria in 1861, and enlarged in 1866, 1876, 1897, 1902, and 1911, and the dignity of Knight Grand Commander may be conferred on Princes or Chiefs of India, or upon British subjects for important and loyal service rendered to the Indian Empire; the second and third classes for services in the Indian Empire of not less than thirty years in the department of the Secretary of State for India. It consists of the Sovereign, a Grand Master (the Viceroy of India), the first class of forty-four Knights Grand Commanders (22 British and 22 Indian), the second class of one hundred Knights Commanders, and the third class of two hundred Companions, exclusive of Extra and Honorary Members, as well as certain additional Knights and Companions.

The Insignia are (i) the Collar of gold, composed of the lotus of India, of palm branches tied together in satire, of the united red and white rose, and in the centre an Imperial Crown; all enamelled in their proper colours and linked together by gold chains. (ii) The Star of a Knight Grand Commander is composed of rays of gold issuing from a centre, having thereon a star of five points in diamonds resting upon a light blue enamelled circular riband, tied at the ends and inscribed with the motto of the Order, *Heaven's Light our Guide*, also in diamonds. That of a Knight Commander is somewhat different, and is described below. (iii) The Badge, an onyx cameo having Her Majesty Queen Victoria's Royal Effigy thereon, set in a perforated and ornamental oval, containing the motto of the Order surmounted by a star of five points, all in diamonds. (iv) The Mantle of light blue satin lined with white, and fastened with a cordon of white silk with blue and silver tassels. On the left side a representation of the Star of the Order.

The ribbon of the Order (four inches wide for Knights Grand Commanders) is sky-blue, having a narrow white stripe towards either edge, and is worn from the right shoulder to the left side. A Knight Commander wears (a) around his neck a ribbon two inches in width, of the same colours and pattern as a Knight Grand Commander, and pendant therefrom a badge of a smaller size, (b) on his left breast a Star composed of rays of silver issuing from a gold centre, having thereon a silver star of five points resting upon a light blue enamelled circular ribbon, tied at the ends, inscribed with the motto of the Order in diamonds. A Companion wears from his left breast a badge of the same form as appointed for a Knight Commander, but of a smaller size pendant to a like ribbon of the breadth of one and a half inches. All Insignia are returnable at death to the Central Chancery, or if the recipient was resident in India, to the Secretary of the Order at Calcutta.

Sovereign of the Order:—H. I. M. The King.

Grand Master of the Order:—His Excellency the Viceroy and Governor-General of India, the Right Honourable Baron Chelmsford.

Honorary Knights Grand Commanders (G. C. S. I.)

Prince Louis d'Arenberg
Hon. General His Majesty Chowfa Maha Vajiravudh, King of Siam.

Extra Knights Grand Commanders (G. C. S. I.)

H. M. the Queen Empress
H. R. H. The Duke of Connaught

Knights Grand Commanders (G. C. S. I.)

H. H. the Gaekwar of Baroda
H. H. the Maharana of Udaipur
H. H. the Maharajah of Jaipur
H. H. the Maharaja of Travancore
The Marquis of Lansdowne
Baron Reay
H. H. the Maharaja of Jammu and Kashmir
H. H. the Maharaja of Kohlapur
H. H. the Maharaja of Gwalior
Lord Harris
H. H. the Maharaja of Jodhpur
Baron Macdonnell
Earl Curzon of Kedleston
Baron Sandhurst
Lord George Hamilton
H. H. the Raja of Cochin
Baron Amptill
Maharaja Sir Chandra Shamsher Jung of Neeraj
H. H. the Maharaja of Orchha
H. H. the Maharaja of Mysore
Baron Hardinge of Penshurst
H. H. the Begum of Bhopal
Sir Steuart Bayley
Sir Dennis Fitz-Patrick
Sir Dighton Probyn
Baron Sydenham
Sir Arthur Lawley
Sir John Hewett
H. H. the Maharaja of Bikaner
H. H. Maha Rao of Kotah
General Sir O'Moore Creagh
General Sir Edmund George Barrow
H. H. the Raja of Kapurthala
H. H. the Nizam of Hyderabad
H. H. the Aga Khan
H. H. the Nawab of Tonk.
H. H. the Maharao of Cutch.
Baron Carmichael of Skirling.
Baron Pentland.
Baron Willingdon.
H. E. Sir Charles Monro.
H. H. Maharao Raja of Bundi.

Knights Commanders (K. C. S. I.)

Sir Joseph West Ridgeway
Sir David Miller Barbour
Sir Phillip Perceval Hutchins
Sir Henry Edward Stokes
Sir Henry Mortimer Durand
Maj.-Gen. Sir Oliver Richardson Newmarch
Sir Frederick William Richards Fryer
H. H. Maharao of Sirohi
Sir Courtenay Peregrine Ilbert
H. H. Maharao of Bundi
Sir William Mackworth Young

Sir Charles James Lyall
 Sir William John Cunningham
 Sir Richard Udny
 Colonel Sir Howard Melliss
 Sir Arthur Charles Trevor
 Sir John Frederick Price
 Sir Charles Montgomery Rivaz
 Sir James Digges La Touche
 Sir Henry Martin Winterbotham
 Sir James Monteath
 Lieut.-Col. Sir Donald Robertson
 Sir Andrew Henderson Leith Fraser
 Sir Hugh Shakespear Barnes
 Sir William Roe Hooper
 Sir Arundel Tagg Arundel
 Sir Thomas Raleigh
 Sir Arthur Henry Temple Martindale
 Sir James Thomson
 Sir Joseph Bampfylde Fuller
 H. H. Raja of Chamba
 Lieut.-Col. Arthur John, Baron Stamfordham
 Sir Thomas William Holderness
 Sir Lancelot Hare
 Sir Charles Stuart Bayley
 H. H. Raj Rana of Jhalawar
 Raja Sir Tasadduk Rasul Khan of Jahangirabad;
 Oudh
 Sir James Wilson
 H. H. Maharaja of Alwar
 H. H. Raja of Jind
 Sir Henry Erle Richards
 Sir Gabriel Stokes
 Sir George Stuart Forbes
 H. H. Raja of Ratlam
 Sir James Lyle, Baron Inchcape
 Sir Harvey Adamson
 Nawab of Murshidabad
 Lieut.-Col. Sir James Robert Dunlop-Smith
 Sir John Ontario Miller
 Sir Lionel Montague Jacob
 Sir Murray Hammick
 Sir Krishna Govinda Gupta
 Sir Leslie Alexander Selim Porter
 Sir Spencer Harcourt Butler
 Sir Robert Warrand Carlyle
 H. H. Maharaja of Kishangarh
 Sir Reginald Henry Craddock
 Sir James McCrone Douie
 Sir James Scorgie Meston
 Sir Benjamin Robertson
 Sir Richard Amphlett Lamb
 Maharajadhiraj of Burdwan
 Sir Elliot Graham Colvin
 Sir Trevredyn Rashleigh Wynne
 Sir George Casson Walker
 H. H. Maharaja of Dhar
 H. H. Maharaja of Dewas State (Senior Branch)
 Surg.-Gen. Sir Francis Wollaston Trevor
 H. H. Maharaja of Bhutan
 Sir John Nathaniel Atkinson
 Sir William Thomson Morison
 Sir George Head Barclay
 General Sir James Willcocks
 Lieut.-Col. Sir G. Roos-Keppel
 Sir M. F. O'Dwyer
 Sir Salyid Ali Imam
 Sir D. C. Baillie
 Sir Michael William Fenton
 Sir Harold Arthur Stuart
 Colonel Sir Sidney Gerald Burrard
 Sir William Henry Soloman
 Genl. Sir W. R. Birdwood.
 Sir Sundaram Aiyar Sivaswami Aiyar

Sir Frederick William Duke
 Sir Edward Albert Gait
 H. H. Nawab of Maler Kotla
 H. H. Maharaja of Sirmur
 Sir William Henry Clark
 Sir William Stevenson Meyer
 General Sir Arthur Arnold Barrett
 Major-General Sir Percy Zachariah Cox
 Sir Steyning William Edgerley
 Sir Harrington Verney Lovett
 Sir Robert Woodburn Gillan
 Maharaj Sri Sir Bhairon Singh Bahadur
 Sir Alexander Gordon Cardew
 Lieut.-Col. Sir Hugh Daly
 Sir C. H. A. Hill
 H. H. Maharaja Malhar Rao Baba Saheb Pavar.
 Dewas (Junior Branch)
 H. H. Maharaja Bahadur of Cooh-Behar
 H. H. Maharaja Jam Saheb of Navanagar
 H. H. The Raj Saheb of Dhrangadhra
 Lieut.-Col. Sir F. E. Younghusband
 Sir T. Morrison
 Major-Gen. G. M. Kirkpatrick
 Major-Gen. R. C. O. Stuart
 Sir George Rivers Lowndes
 H. H. Maharajadhiraja Maharawal Sir
 Jowahir Singh Bahadur of Jeisalmir
 Sir Archdale Earle
 Sir Stuart Mitford Fraser
 Sir John Strathedan Campbell
 Sir Frank George Sly
 H. H. the Maharaja of Datia
 H. H. the Maharaj Rana of Dholpur
 Sir William Vincent
 Sir Thomas Holland
 Lieut. General Sir William Raine Marshall.
 Sir James Bennett Brunyate
 Sir Sydney Arthur Taylor Rowlett
 Sir Oswald Vivian Bosanquet
 Sir G. Carmichael
 Dr. Sir M. F. Sadler
 The Right Hon'ble Lord Southborough
 Lieut.-Colonel Maharaja Dalat Singhji of Idar
 The Hon'ble Diwan Bahadur P. Rajagopal
 Achariyar
 R. Nathan

Companions (C. S. I.)

Lieut.-Col. William Dickinson
 Major-Gen. Beresford Lovett
 Major-Gen. Phillipp Durham Henderson
 Col. Leopold John Herbert Grey
 Major-Gen. Henry Wylie
 Sir Henry William Primrose
 Lieut.-Gen. Michael Weekes Willoughby
 Raja Piar Mohan Mukharji of Uttarpara
 Sir Frederick Russell Hogg
 Col. Charles Edward Yate
 William Rudolph Henry Merk
 Chhatrapati, Jagirdar of Alipura
 Col. John Clerk
 James Richard Naylor
 Sardar Jiwan Singh of Shahzadpur
 Col. George Herbert Trevor
 Col. Frederick J. Home
 Lieut.-Col. Henry St. Patrick Maxwell
 Sir Jervoise Athelstane Baines
 Sir Thomas Salter Pyne
 Alan Cadell
 Arthur Forbes
 Sir Arthur Upton Fanshawe
 James Fairbairn Finlay
 Joseph Parker

Charles Walter Bolton
 Horace Frederick D'Oyly Moule
 Surg.-Gen. James Cleghorn
 Col. Thomas Gracey
 Col. James Aloysius Miley
 Sir Henry Babington Smith
 Henry Aiken Anderson
 Lieut.-Col. Sir Arthur Henry McMahon
 Sir Henry Evan Murchison James
 James Knox Spence
 Charles William Odling
 Alexander Walmesley Cruickshank
 David Norton
 Thomas Stoker
 Sir Edward Richard Henry
 Lucas White King
 Sir Mackenzie Dalzell Chalmers
 Surgn.-Gen. David Sinclair
 Henry Farrington Evans
 Lt.-Col. John Muir Hunter
 Richard Gillies Hardy
 Herbert Charles Fanshawe
 Sir Frederick Styles Philpin Lely
 George Robert Irwin
 Lieut.-Gen. Sir George Lloyd Reilly Richardson
 Robert Burton Buckley
 Arthur Frederick Cox
 Charles Gerwien Bayne
 Hartley Kennedy
 Sir Edwin Grant-Burles
 Major-Gen. Trevor Bruce Tyler
 William Charles Macpherson
 Lt.-Col. James Alexander Lawrence Montgomery
 Lt.-Gen. Henry Doveton Hutchinson
 Raja of Burdwan
 Nawab of Pahasu
 Raja Badan Singh of Malaudh
 Col. James White Thurburn
 Alfred Brereton
 William Thomas Hall
 Richard Townsend Greer
 Sir Louis William Dane
 Sir Alfred Macdonald Bulteel Irwin
 Col. James Bird Hutchinson
 Raja Ram Pal of Kotlehr
 Hermann Michael Kisch
 Sir Cecil Michael Wilford Brett
 Herbert Bradley
 Sir Frank Campbell Gates
 John Mitchell Holms
 Percy Seymour Vessey Fitzgerald
 Lt.-Col. Willoughby Pitcairn Kennedy
 Raja Narendra Chand
 Arthur Delaval Younghusband
 Oscar Theodore Barrow
 Col. Howard Goad
 Francis Alexander Slacke
 Saiyid Husain Bilgrami
 Percy Comyn Lyon
 Algernon Robert Sutherland
 Sir George Watson Shaw
 William Arbuthnot Inglis
 Romer Edward Younghusband
 Major-General Herbert Mullaly
 John Alexander Brown
 Col. Henry Finnis
 Maj.-Gen. Sir Alfred William Lambart Bayly
 Maurice Walter Fox-Strangways
 William Lochiel Sapte Lovett Cameron
 Sir Edward Douglas MacLagan
 Raja Madho Lal of Benares
 Lieut.-Col. Charles Herbert
 Sir Ashutosh Mukharji

Maj.-Gen. Sir Henry Montague Pakington
 Hawkes
 Dr. Sir Rash Behari Ghose
 Francis Capel Harrison
 Comdr. Sir Hamilton Pym Freer-Smith
 Andrew Edmond Castle Stuart
 Norman Goodford Cholmeley
 Walter Francis Rice
 Havilland Le Mesurier
 Cecil Edward Francis Bunbury
 Major-General Reginald Henry Mahon
 Rear-Admiral Allen Thomas Hunt
 Henry Walter Badoek
 James Mollison
 Sir Pirajirao Bapu Sahib Ghatge
 John Walter Hose
 Charles Ernest Vear Goument
 Herbert Lovely Eales
 Frederick Beadon Bryant
 George Moss Harriott
 Ernest Herbert Cooper Walsh
 Sir Edward Vere Levinge
 Robert Nathan
 Lieut.-Col. Charles Archer
 James Peter Orr
 Herbert Alexander Casson
 William Axel Hertz
 Sir Mahadev Bhaskar Chaulab
 George Seymour Curtis
 Brevet-Lieut.-Colonel Clive Wigram
 Herbert Thompson
 Rao Bahadur Nanak Chand
 Surgeon-General William Burney Bannerman
 Lieut.-Col. Sir John Ramsay
 Stuart Lockwood Maddox
 Gilbert Thomas Walker
 Lieut.-Col. Phillip Richard Thornhagh Gurdon
 Khan Zulfikar Ali Khan of Maler Kotla
 Surgeon-General George Francis Angelo Harris
 Edmund Vivian Gabriel
 John Stuart Donald
 Henry Montague Segundo Mathews
 Arthur Crommelin Hankin
 Faridoonji Jamshedji
 Maulvi Ahmad Hussain
 Horace Charles Mules
 H. H. Raja Bijie Chand, Raja of Bilaspur
 Lieut.-Col. Arthur Russell Aldridge
 Lieut.-Col. Mathew Richard Henry Wilson
 John Charles Burnham
 Col. Thomas Francis Bruce Renny-Tailyour.
 Michael Kennedy
 Thakor Karansinghji Vajirajji
 Col. Alain Chartier de Lotbiniere Joly de
 Lotbiniere
 Major-General Sir Herbert Vaughan Cox
 Brev.-Col. Robert Smeiton MacLagan
 Lieut.-Col. Charles Mowbray Dallas
 Edward Henry Scamander Clarke
 Sir Jagadish Chandra Bose
 Sir Abbas Ali Baig
 Oswald Campbell Lees
 Lt.-Col. G. G. Giffard
 F. W. Johnston
 William Henry Lucas
 A. L. Saunders
 Vakhatsinghji Kesrisinghji Thakor Sahab of
 Sayla
 Paul Gregory Melitus
 Lieut.-Col. Albert Edward Woods
 William Exall Tempest Bennett
 Hon. Maj. Nawabzada Obaidullah Khan
 William Ogilvie Horne

William Harrison Moreland, C.I.E.
 Diwan Bhdr. Chaube Raghunath Das, of Kotah
 Col. Lestock Hamilton Reid
 Surg.-Gen. Henry Wickham Stevenson
 Hon. Lieut.-Col. Raja of Lambagraon
 Lionel Davidson
 George Carmichael
 Lieut.-Col. Donald John Campbell MacNabb
 Lieut.-Col. Henry Walter George Cole
 Henry Venn Cobb
 Henry Wheeler
 Sardar Daljit Singh of Jullunder
 Lt.-Col. Raj Kumar Bir Bikram Singh
 Walter Maude
 Sir Bertram S. Carey
 Sir Michael Nethersole
 Henry Ashbrooke Crump
 William James Reid
 Mysore Kantharaj Urs
 Walter Gunnell Wood
 John Cornwallis Godley
 A. Butterworth
 S. M. Edwardes
 N. D. Beatson-Bell
 Lt.-Col. F. H. Elliott
 Lt.-Col. A. B. Dew
 W. M. Hailey
 H. L. Keeling
 A. H. Grant
 H. Sharp.
 L. C. Porter
 R. R. Scott
 Lieut.-Col. J. W. E. Douglas-Scott Montagu
 Rear-Admiral Arthur Hayes-Sadler
 Laurence Robertson
 John Ghest Cumming
 Lieut.-Col. Stephen Lushington Aplin
 Sir James Houssemayne DuBoulay
 John Barry Wood
 H. R. C. Dobbs
 Col. L. A. C. Gordon
 T. A. Chalmers
 R. Burn
 J. H. Kerr
 G. B. H. Fell
 Major-General W. C. Knight
 Lt.-Col. C. Kaye
 Patrick James Fagan
 Col. Hormasji Edulji Banatwalla, I.M.S.
 Lt.-Col. Lawrence Impey.
 Col. Benjamin William Marlow
 Lt.-Col. Harold Fenton Jacob
 Lt.-Col. Francis Beville Prideaux
 Lt.-Col. Stuart George Knox
 Col. Hugh Whitechurch Perry
 Henry Cecil Ferard
 Charles Evelyn Arbuthnot William Oldham
 Evan Maconochie
 Francis Coope French
 Brevet Col. C. W. G. Richardson
 Lt.-Col. A. P. Trevor
 Horatio Norman Bolton
 Louis James Kershaw
 H. S. Laurence
 L. E. Buckley
 C. H. Bompas
 M. M. S. Gubbay
 Maj.-Gen. R. Wapshare
 Brig.-Gen. J. M. Walter
 Major General Sir A. S. Cobbe
 Major General J. C. Rimington
 Major General Sir John Fletcher MacMunn
 Brevet Colonel H. R. Hopwood

Brig. General R. H. W. Hughes
 Brig. General W. G. Hamilton
 Lieut. Col. A. W. N. Taylor
 Major A. J. Anderson
 Brig. General Theodore Fraser
 Brig. General W. N. Campbell
 Col. Thomas A. Harrison
 Major General L. C. Dunsterville
 Hugh McPherson
 Henry Fraser Howard
 Henry Hubert Hayden
 Lieut.-Col. Herbert Des Voeux
 The Shaikh of Kuwait
 P. R. Cadell, I. C. S.
 Lt. Col. T. W. Douglas
 Col. C. Mactaggart, I.M.S.
 J. P. Thompson, I.C.S.
 R. Meredith
 H. L. Stevenson, I.C.S.
 M. N. Mehta, Minister, Baroda State
 Lt.-Col. T. W. Haig
 H. C. Norman
 C. H. Todhunter, I.C.S.
 A. P. Mudliman, I.C.S.
 F. C. Rose
 S. H. Freeman, I.C.S.
 P. W. Moole, I.C.S.

OFFICERS OF THE ORDER.

Secretary, Sir John Wood

Registrar, Col. Sir Douglas F. R. Dawson

The Most Eminent Order of the Indian Empire.

This Order, instituted by H. M. Queen Victoria, Empress of India, Jan. 1st, 1878, and extended and enlarged in 1886, 1887, 1892, 1897, and 1902 is conferred for services rendered to the Indian Empire, and consists of the Sovereign, a Grand Master, thirty-two Knights Grand Commanders (of whom the Grand Master is first and principal), ninety-two Knights Commanders, and an indefinite number of Companions (not exceeding, without special statute, 20 nominations in any one year); also Extra and Honorary Members over and above the vacancies caused by promotion to a higher class of the Order, as well as certain Additional Knights and Companions appointed by special statute Jan. 1st, 1909, commemorative of the 50th Anniversary of the assumption of Crown Govt. in India.

The Insignia are: (i) The COLLAR of gold formed of elephants, lotus flowers, peacocks in their pride, and Indian roses, in the centre the Imperial Crown, the whole linked together with chains; (ii) The STAR of the Knight Grand Commander, comprised of five rays of silver, having a small ray of gold between each of them, the whole alternately plain and scaled, issuing from a gold centre, having thereon Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatrix Auspiciis*, and surmounted by an Imperial Crown gold; (iii) The BADGE, consisting of a rose, enamelled gules, barbed vert, and having in the centre Her Majesty Queen Victoria's Royal Effigy, within a purple circle, edged and lettered gold, inscribed *Imperatrix Auspiciis*, surmounted by an Imperial Crown, also gold; (iv) The MANTLE is of Imperial purple satin, lined with and fastened by a cord of

white silk, with purple silk and gold tassels attached. On the left side a representation of the Star of the Order.

A Knight Commander wears: (a) around his neck a ribbon two inches in width, of the same colour (purple) and pattern as a Knight Grand Commander, pendent therefrom a badge of smaller size: (b) on his left breast a star, similar to that of the first class, but the rays of which are all of silver.

The above mentioned Insignia are returned at death to the Central Chancery, or if the Knight was resident in India to the Secretary of the Order at Calcutta.

A Companion wears from the left breast a badge (not returnable at death) of the same form as appointed for a Knight Commander, but of smaller size, pendent to a like ribbon of the breadth of one and a half inches.

Sovereign of the Order:—The King, Emperor of India.

Grand Master of the Order:—Baron Chelmsford.

Honorary Knights Grand Commanders (G. C. I. E.)

The ex-Emperor of Korea

Shaikh Sir Khazal Khan, Shaikh of Moham-
merah and Dependencies.

Extra Knight Grand Commander (G. C. I. E.)

The Duke of Connaught

Knights Grand Commanders (G.C.I.E.)

Lord Reay
The Maharao of Cutch
Lord Lansdowne
Lord Harris
The Nawab of Tonk
The Wali of Kalat
Lord Sandhurst
Maharaja of Karauli
Thakur Sahib of Gondal
Thakur Sahib of Morvi
Sir George Faudel-Phillips
The Maharaja of Benares
Lord Curzon of Kedleston
The Maharaja of Jaipur
The Maharaja of Orchha
Lord Ampthill
Maharao of Bundi
The Maha Rao of Sirohi
The Aga Khan
The Maharaja of Travancore
Lord Lamington
The Begam of Bhopal
Sir Edmond Elles
The Nawab of Janjira
Sir Walter Laurence
Sir Arthur Lawley
The Maharaja of Bikaner
The Maha Rao of Kotah
Lord Sydenham
The Nawab of Rampur
Maharaj Sir Kishen Parshad
Lord Hardinge
Lord Carmichael
Maharaja of Kashmir

Sir Louis Dane
Maharaja of Bobbili
Lord Stamfordham
Sir Guy Fleetwood Wilson
Sir John Jordan
The Maharana of Udaipur
The Maharaja of Patiala
The Mir of Khairpur
The Raja of Cochin
Lord Pentland
The Raja of Pudukottai
Lord Willingdon
Maharaja of Kolhapur
The Yuvaraja of Mysore
Sir Charles Stuart Bayley
Maharaja of Darbhanga
H. H. the Maharaja of Jind
The Earl of Ronaldshay
Sir Michael Francis O'Dwyer
Lt.-Col. Sir George Olaf Roos-Keppe
Sir Gulam Muhammad Ali, Prince of Arcot
Maj-Gen. Sir Percy Zachariah Cox
H. H. the Maharaja of Indore
The Raja of Cochin
Sir William Duke
Sir W. S. Meyer
Lieut. (Temp. Captain) G. A. Lloyd
The Maharaja of Baroda
The Maharaja of Alwar

Honorary Knights Commanders (K. C. I. E.)

Sir Leon E. Clement-Thomas
H. E. Shaikh Sir Hussein Kuli Khan Mokhber
ed-Dowlet, Persian Minister of Telegraphs
Dr. Sven Hedin
The Sultan of Shehr and Mokalla
Prince Ismail Mirza, Amir-i-Akram
Cavaliere Filippo De'Filippi
General Sir Baber Shumshere Jung Bahadur,
Rana of Nepal
H. E. the Amir of Najd and Hassa and Katif
General Sir Judha Shumshere Jung Bahadur,
Rana of Nepal
Sultan Sir Abdul Karim Fadthli bin Ali of
Labej
Sir Alfred Martineau

Knights Commanders (K. C. I. E.)

Surg.-Gen. Sir Benjamin Simpson
Sir Albert James Leppoc Cappel
Sir Donald Mackenzie Wallace
Sir Alfred Woodley Croft
Sir Bradford Leslie
Sir Arthur Baron Carnock
Sir Guildford Molesworth
Sir Frederick Russell Hogg
Sir Henry Mortimer Durand
Sir Arthur George Macpherson
Sir Henry Stuart Cunningham
Raja of Lunawara
Sir Roper Lethbridge
Sir Henry Hoyle Howorth
Sir Edward Charles Kayll Ollivant
Sir Henry Seymour King
Baron Incheape
Col. Sir Henry Revenshaw Thuillier
Sir Wm. R. Brooke
Maharaja of Gidhaur
Lieut.-Col. Sir Adelbert Cecil Talbot
H. H. Maharaja of Ajaigarh
Sir Henry William Bliss

Nawab of Loharu
 Sir John Jardine
 Rear-Admiral Sir John Hext
 Sir Mancherjee Bhownagree
 Col. Sir Thomas Holdich
 Sir Andrew Wingate
 Raja Sir Harnam Singh, Ahluwalla
 Sir S. Subramaniya Aiyar
 Sir Alexander Cunningham
 Sir Henry Evan Murchison James
 Sir James George Scott
 Sir Lawrence Hugh Jenkins
 Sir Herbert Thirkell White
 Sir Frederick Augustus Nicholson
 Sir Arthur Upton Fanshawe
 Raja Dhiraj of Shahpura
 Sir Gangadhar Rao Ganesh, Chief of Miraj
 (Senior Branch)
 Brevet-Col. Sir Buchanan Scott
 Col. Sir John Walter Ottley
 H. H. Raja of Sailana
 Lieut.-Col. Sir Francis Edward Younghusband
 Major-General Sir James R. L. Macdonald
 Sri Sir Ugyen Wangchuk, Tongsa Penlop of
 Bhutan
 Sir Fredric Styles Philpin Lely
 Lt.-Col. Sir Arthur Henry McMahon
 Gen. Sir Donald James Sim McLeod
 Maharaja of Balrampur
 Sir Francis Whitmore Smith
 Nawab of Pahasu
 Sir Arthur Naylor Wollaston
 Sir Thomas Henry Holland
 Nawab of Hyderabad
 H. H. Maharajadhiraja of Kishangarh
 Raja of Mahmudabad
 Sir Trevredyn Rashleigh Wynne
 Sir Richard Morris Dane
 Maharajadhiraja of Burdwan
 Sir Wilhelm Schlich
 Sir Theodore Morison
 Lieut.-Gen. Sir Robert Irvin Scallan
 Sir John David Rees
 Rear-Admiral Sir Edmond John Warre Slade
 Sir John Benton
 Sir Archdale Earle
 Sir Charles Stewart-Wilson
 Lieut.-Gen. Sir Malcolm Henry Stanley Grover
 Sir Charles Raitt Cleveland
 Field Marshal Sir Douglas Haig
 Lieut.-Col. Sir Hugh Daly
 Sir Henry Parsall Burt
 Sir James Houssemayne DuBoulay
 Sir Rajendra Nath Mukharji
 Lieut.-Col. Sir Henry Beaufoy Thornhill
 Sir Gangadhar Madho Chitnavis
 H. H. Nawab of Jaora State
 H. H. Raja of Sitamau State
 Raj Sahib Sir Amarsinhji Banesinhji (Vankaner)
 Sir Ram Krishna Gopal Bhandarkar
 Sir Michael Filose
 Rear-Adm. Sr. Colin Richard Keppel
 Sir John Stanley
 Sir Saint-Hill Eardley-Wilmot
 Sir Francis Edward Spring
 Maharaja Sri Sir Vickrama Deo
 Rana Sir Sheoraz Singh (U P)
 H. H. Maharawat of Partabgarh
 H. H. Maharaja of Bijawar State, Bundel-
 khand
 Sir John Twigg
 Sir George Abraham Grierson
 Sir Marc Aurel Stein

Maj.-Gen. Sir Francis Henry Rutherford
 Drummond
 Nawab Sir Bahram Khan
 Sir Henry Alexander Kirk
 Sir Alfred Gibbs Bourne
 Chief of Jamkhandi
 Sir Frank Campbell Gates
 Sir George Macartney
 Sir Edward Douglas MacLagan
 Maj.-Gen. Sir George John Younghusband
 Sir Brian Egerton
 Maharaja of Dinajpur.
 Sir Stephen George Sale
 Sir Prabhashankar D. Pattani
 Maharaja of Kasimbazaar
 Lieut.-Col. Sir John Ramsay
 Sir William Maxwell
 Sir Feridoonji Jamshedji, C.S.I.
 Sir Mokshagundam Visvesvaraya
 His Highness the Maharaja of Samthar
 Sir John Stuart Donald
 Lieut.-Col. Sir Percy Molesworth Sykes
 Sir Edward Vere Levinge
 Nawab Sir Syed Shams-ul-Huda
 Raja Sir Rampal Singh
 Sir Alexander Henderson Diack
 Sir Sao Mawng
 H. H. Raja Sir Arjun Singh of Narsingarh
 Captain Malik Sir Umar Hayat Khan
 Sir Robert Bailey Clegg
 Sir Henry Wheeler
 Sir Mahadeo B. Chaubal
 Sir James Walker
 Mirza Sir Abbas Ali Baig
 H. H. the Raja of Bilaspur
 Nawab Sir Sahibzada Abdul Qaiyum
 Sardar Sir Shamsheer Singh
 Major-Gen. Sir Raleigh Gilbert Egerton
 Major-Gen. Sir Henry D'Urban Keary
 Sir George Cunningham Buchanan
 Major-Gen. Sir William George Lawrence Beynon
 Raja of Rajgarh
 Raja of Chamba
 Raja of Suket
 Rana of Barwani
 Raja of Sonpur
 Capt. Raja Sir Hari Singh
 Sir John Barry Wood
 Sir Bertram Sansmarez Carey
 Sir Alfred Hamilton Grant
 Thakur Sahab of Rajkot
 Lt.-Col. W. J. Buchanan
 Lt.-Col. Raja Jaichand of Lambagraon
 Rear-Admiral D. St. A. Wake
 C. E. Low, I.C.S.
 Maharaj Kumar Bhopal Singh of Udaipur
 Nawab Mir Shang Shah, Kalat State
 Sheik Isa Bin Ali, Chief of Bahrein
 Major General Sir Wyndham Knight
 Major General Sir Vere Bonamy Fane
 Major General Sir Alfred Horsford Bingley
 Sir Godfrey Butler Hunter Fell
 Lieut.-General Sir Thomas Joseph O'Donnell
 Major General Sir Godfrey Williams
 Sir Nicholas Dodd Beatson Bell
 Sir William Sinclair Marriss
 His Highness Mehtar Sir Shuja-ul-Mulk of
 Chitral
 Khan Bahadur Maulvi Sir Rahim Bakhsh
 Sir James Herbert Seabrooke
 Baron Montague of Beaulieu
 Sir Herbert Guy Deering
 Brigadier-General H. F. E. Freeland

Lieut. M. M. V. Raje Ghorpade, Chief of Mudhol
The Hon'ble Mr. W. Maude, I. C. S.
The Hon'ble Rai Bahadur Sir Pepin Krishna
Bose, Kt.
C. M. Stevenson Moore, I.C.S.

Ex-Officio Companion (C. I. E.)

Sir Courtenay P. Ilbert

Honorary Companions (C. I. E.)

Laurent Marie Emile Beauchamp
Jean Etienne Justin Schneider
Haji Mohammad Ali Rais-ut-Tujjar.
James Carruthers Rhea Ewing.
Lt.-Col. Ghana Bhikram
Sheik Abdulla Bin Esa
Haidar Khan, Chief of Hayat Daud, Persian
Gulf
Mirza Ali Karam Khan Shujai, Nizam of Bandar-
Abbas
Lieut. Col. Partab Jung Bahadur Rana
Major Alfred Paul Jacques Masson

Companions (C. I. E.)

Thomas Mitchell Gibbon
George Smith
Col. John H. Rivett-Carnac
Roscoe Bocquet
Pierre Francois Henri Nanquette
Stephen Paget Walter Vyvyan Luke
Sir Charles James Lyall
Charles Edward Pitman
Richard Isaac Bruce
Sir Steuart Colvin Bayley
Lieut.-Col. Charles William Owen
George Felton Mathew
Sir Henry Christopher Mance
Maj.-Genl. Thomas Ross Church
Thakur Bichu Singh
Rev. William Miller
Benjamin Lewis Rice
Mortimer Sloper Howell
Maj.-Gen. Viscount Downe
Sir George Watt, M.B.
Joseph Ralph Edward John Royle
Rai Mehta Punna Lalji
The Rt. Hon. Saiyid Ameer Ali
William James Maitland
Col. Charles Wemyss Muir
Sir Frank Forbes Adam
Frederick Thomas Granville Walton
Major.-Gen. Charles Smith Maclean
Major-Gen. James Cavan Berkeley
Charles Henry Tawney
Henry Irwin
Sir James L. Walker
Surgn.-Maj. John Findlay
Rayner Childe Barker
Lieut.-Col. Charles Henry Ellison Adamson
Gen. William Percival Tomkins
Berthold Ribbentrop
Langton P. Walsh
Jeremiah G. Horsfall
Edmund Neel
Brevet Lieut.-Col. Sir George L. Holford
Maj.-Gen. L. H. E. Tucker
Ernest Octavius Walker
Sir John Prescott Hewett
Lieut.-Col. Henry Percy Poingdestre Leigh
Sir J. Bampfylde Fuller

Sir William Turnerisel Thton-Dyer
Major-Gen. G. F. L. Marshall
Edward Horace Man
Lieut.-Gen. Sir G. L. R. Richardson
Paul Gregory Melitus
Lt.-Col. Sir Richard Carnac Temple
Edward C. S. George
Lt.-Col. J. Manners Smith
Col. Frank William Chatterton
Sri Ram Bhikaji Jatar
Fazulbhai Visram
Col. H. S. Jarett
Arthur C. Hankin
Adam G. Tytler
Charles E. Buckland
Alexander B. Patterson
Harry A. Acworth
Col. C. A. Porteous
Col. C. T. Lane
Sir Steyning W. Edgerley
Col. W. R. Yeilding
Henry J. Stanyon
Frederick John Johnstone
Col. Samuel Haslett Browne
Dr. Rash Behari Ghosh
Frank Henry Cook
Francis Erskine Dempster
Lieut.-Col. John Shakespear
Lieut.-Col. James John Macleod
Capt. Norman Franks
Sir William Earnshaw Cooper
Maharaj Rajashri Sankara Subbaiyar
Khan Bahadur Sir Naoroji Pestonji Vakil
Col. Russell Richard Pulford
Col. Algernon George Arnold Durand
Col. Robert Alexander Wauhope
Edwin Darlington
Dr. Waldemar M. Haffkine
Rustamji Dhanjibhai Mehta
Charles Godolphin William Hastings
Khan Bahadur Mancherji Rustamji Dholu
Col. John Charles F. Gordon
Sir Benjamin Robertson
Duncan James Macpherson
John Campbell Arbuthnott
Sir Robert Warrand Carlyle
Henry Cecil Ferard
Robert Batson Joyner
Charles George Palmer
Lieut.-Col. Samuel John Thomson
Rai Bahadur Sir Bipin Krishna Bose
P. C. H. Snow
Hony. Lieut.-Col. Kunwar Bir Bikram Singh
Lieut.-Col. A. B. Minchin
W. T. Van Someren
Charles Still
Col. H. K. McKay
A. Izat
Lieut.-Col. W. B. Browning
Lieut.-Col. J. J. Holdsworth
Francis Jack Needham
Robert Giles
Vishwanath Patankar Madhava Rao
Col. Walter Gawen King
James Sykes Gamble
Sir George William Forrest
Lieut.-Col. Frank Popham Young
Reginald Hawkins Greenstreet
John Sturrock
John Stuart Beresford
Lieut.-Col. Malcolm John Meade
Edward Louis Cappell
Sir Lancelot Hare

George Moss Harriott
 Frederick George Brunton Trevor
 Diwan Bahadur P. Rajaratna Mudaliyar
 Sir Walter Charleton Hughes
 Edmund Penny
 Henry Marsh
 Lieut.-Col. Bertrand Evelyn Mellish Gurdon
 Rai Bahadur Sir Kailash Chandra Basu
 Henry Felix Hertz
 Courtenay Walter Bennett
 Rear-Admiral Walter Somerville Goodridge
 Col. Solomon Charles Frederick Peile
 Bertram Prior Standen
 Henry Alexander Sim
 Lieut.-Col. Sir James Robert Dunlop-Smith
 Col. John Crimmin
 Lieut.-Col. Granville Henry Loch
 Fardunji Kuvarji Tarapurvala
 Babu Kali Nath Mitter
 Sir William Jameson Soulsby
 Col. William John Read Rainsford
 Col. Oswald Claude Radford
 Major-General George Kenneth Scott-Moncrieff
 Brig-General Thomas Edwin Scott
 Lieut.-Col. Laurence Austine Waddell
 General Asaf Ali Khan
 Subadar-Major Sardar Khan
 Hony. Capt. Yasin Khan
 Sidney Preston
 Sir Murray Hammick
 Sir Alexander Pedler
 Sir Richard Amphlett Lamb
 Alexander Lauzun Pendock Tucker
 Diwan Bahadur Kanchi Krishnaswami Rao
 Lieut.-Col. John Clibborn
 Col. George Wingate
 Lieut.-Col. George Hart Desmond Gimlette
 Arthur Henry Wallis
 Alexander Johnstone Dunlop
 George Herbert Dacres Walker
 Rai Bahadur Nanak Chand
 Sir Spencer Harcourt Butler
 Lieut.-Col. Frank Cooke Webb Ware
 Hony. Major Thomas Henry Hill
 Alexander Porteous
 Col. Thomas Elwood Lindsay Bate
 Hon. Lockhart Mathew St. Clair
 Sir Marshall Reid
 Rao Bahadur Pandit Sakhdeo Parshad
 Stuart Mitford Fraser
 Maj.-Gen. Francis Edward Archibald Chamier
 Lt.-Gen. Ernest De Brath
 Walter Bernard de Winton
 Algernon Elliott
 Lt.-Col. Charles Arnold Kemball
 Edward Giles
 Havilland Le Mesurier
 Robert Nathan
 Lieut.-Col. Alfred William Alcock
 Arthur Hill
 Douglas Donald
 Sir Jagadish Chandra Bose
 Raja Muhammed Nazim Khan; Mir of Hunza
 Raja Sikandar Khan, of Nagar
 Sir William Dickson Cruickshank
 Thomas Jewell Bennett
 Henry Wenden
 Charles Henry Wilson
 Rao Bahadur Shyam Sundar Lal, Diwan of
 Kishangarh
 Robert Herriot Henderson
 Mir Mehrulla Khan, Raisani
 Nawab Fateh Ali Khan, Kazilbash

Charles Henry West
 John Pollen
 Charles Brown
 George Huddleston
 Lieut.-Col. Montagu William Douglas
 Major-General Havelock Hudson
 Lieut.-Col. Arthur D'Arcy Gordon Bannerman
 Rai Bahadur Gunga Ram
 Robert Douglas Hare
 William Bell
 Claude Hamilton Archer Hill
 Edward Henry Scamander Clarke
 Webster Boyle Gordon
 Lieut.-Col. Robert Arthur Edward Benn
 Madhu Sudhan Das
 George James Perram
 Raja Pertab Bahadur Sing
 Sir C. Sankaran Nayar
 William Ninnis Porter
 Stephen Finney
 Edward Waller Stoney
 Walter Home
 C. W. Waddington
 Khan Bahadur Barjorji Dorabji Patel
 Lieut.-Col. W. F. T. O'Connor
 Lionel Truninger
 David Bayne Horn
 Lieut.-Col. Charles Brooke Rawlinson
 Richard Grant Peter Purcell McDonnell
 Commander George Wilson
 Captain Thomas Webster Kemp
 William Harrison Moreland
 Pirajirao Bapu Saheb Ghatge
 Henry Robert Conway Dobbs
 Surg.-Gen. William Richard Browne
 Montague de Pomeroy Webb
 Hugh William Orange
 Lieut.-Col. Charles Archer
 Lionel Maling Wynch
 Arthur William Uglow Pope
 George Frederick William Thibaut
 Major-General William Arthur Watson
 Col. Alain Chartier de Lotbiniere Joly de
 Lotbiniere
 Lieut.-Col. Aubrey John O'Brien
 Herbert Cunningham Clogstoun
 Thomas Robert John Ward
 Lieut.-Col. Charles Ferguson Campbell
 Brig.-Genl. Harry Davis Watson
 Hon. Sir Derek William George Keppel
 Commander Sir Charles Leopold Cust
 Lt.-Col. Sir David PRAIN
 Col. William John Daniell Dundee
 Sir Ibrahim Rahimtoola
 Sir Edward Albert Gait
 Robert Greig Kennedy
 Hony. Col. Arthur Hills Gleadowe-Newcomen
 Edward Anthony Doran
 Col. Henry Thomas Pease
 Lieut.-Col. Malcolm Sydenham Clarke Campbe
 Lieut.-Col. Arthur Le Grand Jacob
 Sir John Stratheden Campbell
 Srimant Anandrao Gaekwar Frederick Palmer
 Thomas Henry Stillingfleet Biddulph
 Surgn.-Lieut.-Col. Sir Warren Roland Crooke-
 Lawless
 Lt.-Col. Alexander John Maunse MacLaughlin
 George Claudius Beresford Stirling
 Francis St. George Manners-Smith
 Lieut.-Col. David Melville Babington
 Samuel Digby
 Sir Pazhamarneri Sundaram Aiyar Sivaswam
 Aiyar

Francis Guy Selby
 Lieut.-Gen. William Riddell Birdwood
 William Herbert Dobbie
 Lieut.-Col. John Norman MacLeod
 Rear-Admiral George Hayley-Hewett
 Ralph Buller Hughes-Buller
 Lieut.-Col. Francis Frederic Perry
 Lt.-Col. Francis Granville Beville
 Diwan Bahadur Diwan Daya Kishen Kaul
 Lieut.-Col. Stuart Hill Godfrey
 Lieut.-Colonel Denys Brooke Blakeway
 Maung Bah-Too
 Brigadier-General Ernest William Stuart King
 Maconochy
 William Ellis Jardine
 Thomas Corby Wilson
 Sir Frederick Loch Halliday
 Percy Wyndham
 Hugh Spencer
 Charles Ernest Low
 Cecil Ward Chichele-Plowden
 William King-Wood
 Lieut.-Col. Richmond Trevor Crichton
 Albert Claude Verrieres
 Diwan Bahadur P. Rajagopala Chariyar
 Muhammad Aziz-ud-din Khan
 Nilambar Mukharji
 Rai Bahadur Kali Prasanna Ghosh
 John Newlands
 Col. James Henry Elias Beer
 Lieut.-Col. Henry Parkin
 Col. Robert Neil Campbell
 Montagu Sherard Dawes Butler
 Lieut.-Col. Stuart George Knox
 Edgar Thurston
 Rai Bahadur Buta Singh
 James Bennett Brunyate
 Frederick James Wilson
 Reginald Edward Enthoven
 Col. Wilfred Malleston
 Henry Venn Cobb
 Reginald Hugh Brereton
 Nrittya Gopal Basu
 William Lochiel Berkeley Souter
 Joseph John Mullaly
 William Didsbury Sheppard
 Oswald Vivian Bosanquet
 Tanjore Madava Rao Ananda Rao
 John Hubert Marshall
 Charles Michie Smith
 Lieut.-Col. Arthur Grey
 Lt.-Col. George Grant Gordon
 Col. Frank Goodwin
 Lieut.-Col. George Frederick Chenevix-Trench
 Archibald Young Gibbs Campbell
 Andrew Bigoe Barnard
 James Adolpus Guider
 John Paul Warbarton
 James William Douglas Johnstone
 Walter Culley Madge
 Lieut.-Col. Wallace Christopher Ramsay Stratton
 James Scott
 Lieut.-Col. Edward Charles Bayley
 Rai Bahadur Lala Sheo Prasad
 Frederick William Johnstone
 Edward Gelson Gregson
 William Malcolm Hailey
 Col. Benjamin William Marlow
 Herbert Gerald Tomkins
 Henry Whitby Smith
 Lieut.-Col. Francis Beville Prideaux
 Lieut.-Col. Arthur Prescott Trevor
 Lieut.-Col. Ramsay Frederick Clayton Gordon

Col. Charles MacTaggart
 Hopetoun Gabriel Stokes
 Lieut.-Col. Leonard Rogers
 Nawab Muhammad Abdul Majid
 Ludovic Charles Porter
 Henry Sharp
 Mahamahopadhyaya Hara Prasad Shashitri
 Lt.-Col. Allen McConaghey
 Nawab Kaisar Khan, Chief of the Magassi Tribe
 Rai Bahadur Diwan Jamiat Rai
 Robert Charles Francis Volkers
 Henry Hubert Hayden
 Alexander Muirhead
 Alexander Emanuel English
 Maung Myat Tun Aung
 William Rucker Stikeman
 Edward Robert Kaye Blenkinsop
 George Sanky Hart
 Nawab Muhammad Salamullah Khan Bahadur,
 Jagirdar of Deulghat
 John Henry Kerr
 Col. George Henry Burden
 Lieut.-Col. Henry Burden
 George William Kuchler
 John Ghest Cumming
 Rev. John Anderson Graham
 Francis Hugh Stewart
 Louis James Kershaw
 William Taylor Cathcart
 Maneckjee Byramjee Dadobhoy
 Hugh Murray
 Rao Raja Raghunath Rao Dinkar (Gwalior)
 Pandit Kailas Narayan Haksar
 Lieut.-Col. Ernest Douglas Money
 Lieut.-Col. Hugh Roderick Stockley
 Major John McKenzie
 Lieut.-Col. Richard Godfrey Jones
 Jaghirdar Desraj Urs
 Lieut.-Col. Armine Brereton Dew
 Lieut.-Col. James Reed Roberts
 Lieut.-Col. Lawrence Impey
 Col. Alexander William Macrae
 Arthur Ernest Lawson
 Albion Rajkumar Banerji
 Major Frederick Fenn Elwes
 Col. William Burgess Wright
 Cecil Archibald Smith
 Baba Gurbaksh Singh Bedi
 Col. Gilbert Walter Palin
 Col. Robert Edward Pemberton Pigott
 Col. William Daniel Henry
 Gerald Francis Keatinge
 Major John Glennie Greig
 Sardar Naoroji Pudamji
 Vala Laksmam Meram, Chief of Thana-Devli
 Leonard William Reynolds
 Charles Archibald Walker Rose
 Major Arthur Dennys Gilbert Ramsay
 Pierce Langrishe Moore
 Alfred Chatterton
 Major Arthur Abercromby Duff
 Lt.-Col. John Lawrence William French-Mullen
 Bernard Coventry
 Albert John Harrison
 Richard Hamilton Campbell
 Rao Bahadur Bangalore Perumal Annaswami
 Mudaliar
 Pratulla Chandra Roy
 Col. Francis Raymond
 Major-General Michael Joseph Tighe
 Lieut.-Col. William Bernard James
 Brevet-Colonel Sydney D'Aguilar Crookshank
 Edward Denison Ross

John Hugh Cox
 Khan Bahadur Muhammad Israr Hasan Khan
 Brig.-General Reginald O'Bryan Taylor
 David Wann Aikman
 Rai Bahadur Pandit Hari Kishan Kaul
 Lieut.-Col. Frederick William Wodehouse
 Major-General Sir Richard Henry Ewart
 Major-General Maitland Cowper
 Thomas Walker Arnold
 Lieut.-Col. Charles Henry James
 Rana Hira Singh of Dhami
 Alexander Blake Shakespear
 John Hope Simpson
 Major Hugh Stewart
 Major William Glen Liston
 Col. Edwin Henry de Vere Atkinson
 Walter Stanley Talbot
 Frank Adrian Lodge
 Col. Robert William Layard Dunlop
 Hrish Kesh Laha
 Nalini Bhusan Gupta
 Joseph Terence Owen Barnard
 Lieut.-Col. Townley Richard Filgate
 Alexander Macdonald Rouse
 Charles Cahill Sheridan
 Brevet-Lieut.-Colonel Herbert de Lisle Pollard-
 Lowlsy
 Brevet-Lt.-Colonel William Wilfrid Bickford
 Hony. Col. John George Knowles
 Henry Cuthbert Streatfield
 Lt.-Col. Cecil Kaye
 William Foster
 Lt.-Col. G. K. Walker
 Sardar Appaji Rao Sitole Ankkar
 Henry Fraser Howard
 Sardar Arur Singh
 Lawrence Mercer
 Sir Joseph Henry Stone
 P. R. Cadell
 Major W. L. Campbell
 Lieut.-Col. G. S. Crawford
 W. C. M. Dundas
 Hon. Col. V. N. Hickley
 J. H. Lace
 Bhupendra Nath Mitra
 A. P. Muddiman
 Charles Cunningham Watson
 H. L. Stephenson
 Major H. B. St. John
 Abanindra Nath Tagore
 W. H. H. Arden-Wood
 J. R. Pearson
 Col. R. J. Blackham
 W. C. Ashmore
 Hugh Edward Clerk
 Percy James Mead
 Deba Prosad Sarbadhikari
 Frank Charles Daly
 Mir Shams Shah, Khan Bahadur
 Haji Bukhsh Ellahie, Khan Sahib
 James Gargrave Covernton
 Louis E. B. Cobden-Ramsay
 William Pell Barton
 George Batley Scott
 Rangnath Narsingh Mudholkar
 Hebbajaju Velaur Nanjundayya
 Lieut.-Colonel James Curry Robertson
 Raghunath Venkaji Sabnis
 Col. William Molesworth
 Phillip Glynn Messent
 Lalubhai Samaldas Mehta
 Mohendranath Ray
 Frank Frederick Lyall

Col. George James Hamilton Bell
 Frank Currie Lowis
 Lewis French
 Col. Sidney Mercer Renny
 Major Walter Hugh Jeffery
 Richard Meredith
 Albert Howard
 Major E. D. Wilson Greig
 Harold Arden Close.
 Richard Hugh Tickell
 Francis Samuel Alfred Slocock
 Lieut.-Col. Fitz Warren Lloyd
 Lieut.-Col. Arthur Leslie Jacob
 Nawab Khair Baksh, Khan Bahadur
 Thomas Summers
 Henry James Wakely Fry
 Kiran Chandra De
 Frank Willington Carter
 Charles Montague King
 Shiekh Raiz Hussain, Khan Bahadur
 Edward Rawson Gardiner
 George Thomas Barlow
 Frederick Samuel Philip Swann
 Berkeley John Byng Stephens
 Mir Kamal Khan, Jam of Las Bela, Kalat
 Rear-Admiral Walter Lumsden
 Major-General Dewan Bishan Das (Jammu and
 Kashmir)
 Major Frederic Gauntlett
 Major Samuel Richard Christophers
 Colonel George William Patrick Dennys
 William Peter Sangster
 Montague Hill.
 Major Frederick Marshman Bailey
 Sahibzada Abdus Samad, Khan of Rampur
 Cecil Bernard Cotterell
 Alfred Windham Lushington
 Suleman Haji Kasim Mitha
 Captain George Prideaux Millett
 Ram Charan Mitra
 Lieut.-Col. Walter Thomas Grice
 Lieut.-Col. Hector Travers Dennys
 Selwyn Howe Fremantle
 Zia-ud-din Ahmed
 Abdul Karim Abdul Shakur Jamal
 Lt.-Col. Cecil Charles Stewart Barry
 John Frederick Gruning
 Lt.-Col. Benjamin Holloway
 Brevet-Lt.-Col. Cyril Mosley Wagstaff
 Arthur Robert Anderson
 Col. Charles Henry Cowie
 Kunwar Maharaj Singh
 David Petrie
 Godfrey Charles Denham
 Lt.-Col. Charles Joseph Windham
 Herbert George Chick
 Lt.-Col. Charles Henry Dudley Ryder
 Geoffrey F. deMontmorency
 Raja Pratab Singh of Ali Rajpur
 Lieut.-Col. Cecil John Lyons Allanson
 Chunilal Hari Lal Setalvad
 John Andrew Turner
 Suresh Prasad Sarbadhikary
 John Norman Taylor
 Khan Bahadur Sardar Din Muhammad Khan
 Lionel Linton Tomkins
 Douglas Marshall Straight
 Moti Chund
 Matthew Hunter
 John Tarlton Whitty
 Moses Mordecai Simeon Gubbay
 Lieut.-Col. C. A. Muspratt-Williams
 Raja Bhagwat Raj Bahadur Singh of Sohawal

Lt.-Col. Robert Charles MacWatt
 George Paris Dick
 Horatio Norman Bolton
 Major William John Keen
 Lieut.-Col. William Magill Kennedy
 Sheikh Maqbul Husain
 Brigadier-General Cyril Harcourt Roe
 Brigadier-General Olfev Bohun Stovin Fairles
 Shore.
 Lieut.-Col. George Sim Ogg.
 Lieut.-Col. Charles Hugh Hodges Nugent
 Commander M. W. Farewell
 Major John Bertram Cunliffe
 Evelyn Berkeley Howell
 Colonel William Montague Ellis
 Raja Venganad Vasudeva Raja
 Lieut.-Col. James Jackson
 James Anderson Dickson McBain
 Rao Bahadur Ganesh Krishna Sathe
 Christopher Addams-Williams
 Rai Bahadur Banshidhar Banerji
 Hammett Reginald Clode Hailey
 Robert Thomas Dundas
 Reginald George Kilby
 Robert Egerton Purves
 Arthur Bradley Kettlewell
 Lala Ram Saran Das
 Khan Bahadur Mian Muhammad Shafi
 Hugh Aylmer Thornton
 Charles Stewart Middlemiss
 Major Frederick Norman White
 John Loader Maffey
 Diwan Bahadur Tiwari Chhajuram
 Seth Chandmul Dhudha
 Steuart Edmund Pears
 William Newton Maw
 John Edward Webster
 Capt. A. G. J. MacIlwaine
 Brig.-General H. A. K. Jennings
 Lt.-Col. T. G. Peacocke
 Major E. J. Mollison
 Thomas Avery
 Captain E. W. Huddleston
 Maj. and Brevet-Col. Richard Alexander
 Steel
 Lt.-Col. J. W. B. Merewether
 Lt.-Col. d'Arey Charles Brownlow
 Brevet Lt.-Col. G. Evelyn Leachman
 R. W. Bullard
 Brevet-Lt.-Col. F. W. Radcliffe
 E. L. Bagshawe
 Charles John Emile Clerici
 Lt.-Col. A. K. Rawlins
 Major Amrose Boxwel
 Lt.-Col. N. R. Radcliffe
 Major William Gillit
 William John Keith
 Henry Miller
 G. B. Power
 Robert Erskine Holland
 Lt.-Col. James Graham Hojel
 Col. John Farmer
 A. J. W. Kitchen
 W. R. Gourlay
 W. S. Coutis
 Khan Bahadur Muhammad Aziz-ud-din Husain,
 Saheb Bahadur.
 Lt.-Col. Westwood Norman Hay
 (Tem.) Major R. S. F. Macrae
 Charles Augustus Tegart
 Major R. E. H. Griffith
 P. A. Churchward
 Diwan Bahadur Lala Bishesar Nath

Rao Bahadur Appaji Ganesh Dandekar
 Charles Francis Fitch
 M. Y. Young
 S. M. Burrows
 P. J. Hartog
 Lt.-Col. (Tem.-Col.) H. A. Young
 Col. Norborne Kirby
 Lt.-Col. J. H. Dickson
 Commander W. R. B. Douglas
 Lt.-Col. Hugh Alan Cameron
 Lt.-Col. W. F. R. Dickson
 Major William Edmund Pye
 Major (Temp. Lt.-Col.) S. M. Rice
 Lt.-Col. C. B. Stokes
 Major E. S. Gillett
 Major E. C. Withers
 Capt. (Tem. Major) Edmund Walter
 Captain Duncan William Wilson
 Francis Sylvester Grimston
 Victor Bayley
 William Alexander
 John Dillon Flynn
 Col. Shafto Longfield Craster
 Sidney Robert Hignell
 Denys de Saumarez Bray
 Henry Phillips Tollinton
 James MacKenna
 Edward Lister
 Lt.-Col. David Waters Sutherland
 Reginald Isidore Robert Glancy
 Arthur Willsteed Cook
 Thomas Eyebrow Moir
 James Crerar
 Henry Robert Crosthwaite
 Hilary Lushington Holman-Hunt
 Gerald Aylmer Levett-Yeats
 Rai Bahadur Hari Ram Goenka
 Taw Sein Ko
 Dewan Bahadur Pandit Krishna Rao Luxman
 Paonaskar
 Jivanji Jamshedji Modi
 Dewan Bahadur Krishnarajapuram Pallegondai
 Puttanna Chetty
 Lt.-Col. John Anderson
 Robert Glover Jaquet
 Major (temporary Lt.-Col.) Ralph Ellis Carr-
 Hall
 Lt.-Col. (Temp. Col. Alexander Hierom) Ogilvy
 Spence
 Lt.-Col. Charles Albert Edmond O'Meara
 Lt.-Col. Godfrey Lambert Carter
 Lt.-Col. Ernest Arthur Frederick Redl
 Harry Seymour Hoyle Pilkington
 James Alexander Ossory Fitzpatrick
 Maj. David Lockhart Robertson Lorimer
 Maj. Terence Humphrey Keyes
 Captain Harold Hay Thorburn
 Lieut. (Temp. Captain) George A. Lloyd
 Captain Khan Muhammad Akbar Khan
 Muhi-ud-din Khan, Sardar Bahadur
 Maj.-Gen. Sardar Natha Singh, Sardar Bahadur
 Maj.-Gen. Sardar Pooran Singh, Bahadur
 Lt.-Col. Girdhar Singh, Sardar Bahadur
 Lt.-Col. Haider Ali Khan, Sardar Bahadur
 Temp. Capt. Philip James Griffiths Pison
 Temp. Capt. Cecil Sutherland Waite
 Major James Ainsworth Yates
 Captain Arnold Talbot Wilson
 Major David Munro
 Reverend William Robert Park
 Brevet-Col. Francis Willam Pirrie
 Commander Hubert McKenzie Salmund
 Lt.-Col. Felix Oswald Newton Mell

Tempy. Hony. Lt.-Col. Seaburne Guthrie Arthur
 May Moens
 Lt.-Col. Bhola Nauth
 Captain Harold Richard Patrick Dickson
 Lt.-Col. Eknath Hathi
 Major (Tempy. Brig.-General) Henry Owen
 Knox
 Col. James Archibald Douglas
 Charles Rowlatt Watkins
 John Henry Owens
 Harry St. John Bridger Philby
 Major Lewis Cecil Wagstaff
 Captain Cyril Penrose Paige
 Maharaja Tashi Namgyal, Maharaja of Sikkim
 Sao Kawn Kiao Sawbwa of Kengtung
 Arthur Herbert Ley
 Peter Henry Clutterbuck
 James Donald
 William Woodward Hornell
 Harchandral Vishindas
 Lt.-Col. Bawa Jiwan Singh
 Thomas Ryan
 Arthur William Botham
 Henry Francis Cleveland
 Augustus Henry Deane
 Lt.-Col. William Byam Lane
 Harry Nelson Heseltine
 Alexander Langley
 Lt.-Col. Henry Smith
 Lt.-Col. Francis William Hallows
 Major Henry Coddington Brown
 Robert Colqohoun Boyle
 Lewis Wynne Hartley
 Raja Sayyid Abu Jafar, Taluqdar of Pirpur
 Rai Bahadur Pandit Gopinath
 Jhala Sri Mansinghji Suraj Sinhi
 Khan Bahadur Khan Ahmad Shah
 Assistant Surgeon Kedar Nath Das
 Brig.-General John Latham Rose
 Lt.-Col. Roger Lloyd Kennion
 Lt.-Col. Hugh Augustus Keppel Gough
 Tempy. Major John Arnold Wallinger
 Captain Edward William Charles Noel
 Colonel William Ewbank
 Lieut.-Col. J. R. Darley
 Lieut.-Col. Harry John Cotter
 Brev. Colonel C. M. Goodbody
 Major J. G. Goodenough Swan
 Major Charles Fraser Mackenzie
 John Izat
 Major Cyril Charles Johnson Barrett
 Major William David Henderson Stevenson
 Captain Robert Edward Alderman
 Major John Gordon Patrick Cameron
 Lieut. J. W. McDermott
 James Laird Kinloch
 Nawab Saiyid Nawab Ali Chaudhuri Khan
 Bahadur
 Clauder Fraser de la Fosse
 Henry Raikes Alexander Irwin
 Bernhard Martin Samuelson
 William Frederick Holms
 George Herman Collier
 Thomas Emerson
 Jyotsananath Ghosal
 Allan William Pim
 George Rainy
 Major George Henry Willis
 Lieut.-Col. Ernest Alan Robert Newman
 Edward Charles Ryland
 Francis William Bain
 John Desmond
 John Ernest Jackson

John Robertson Henderson
 Sardar Bahadur Gurnam Singh
 Kumar Unkar Singh
 Dr. Charles Alfred Barber
 Nasarwanji Navroji Wadia
 Brig.-General Robert George Strange
 Brig.-General Robert Montague Poore
 Brig.-General Cyril Frank Templer
 Colonel Alfred Joseph Caruana
 Lieut.-Col. Herbert Austen Smith
 Brevet Lieut.-Col. F. A. F. Barnardo, I. M. S.
 Captain Seymour Douglas Vale, R. I. M.,
 Arthur Cecil McWatters
 Major Davis Heron
 Major Edmund Tillotson Rich
 A. V. Venkataramana Aiyar
 Major-General Farman Ali Khan Sardar Bahadur
 Lieut.-Colonel Qadir Baksh Khan Bahadur
 Roderick Korneli Biernacki
 Major-General Patrick Hehir
 Brig. General Robert Fox Sorrie
 Brig. General A. B. Hawley Drew
 Colonel Herbert James Barrett
 Brev. Colonel Rowland Hill Martin
 Brev. Colonel The Earl of Radnor
 Colonel Harry John Mahon
 Lieut.-Col. F. W. Bagshawe
 Lieut.-Col. F. E. Geoghegan
 Lieut.-Col. Harold Whiteman Woodall
 Lieut.-Col. Herbert Grenville LeMesurier
 Lieut.-Col. Rollo St. John Gillespie
 Lieut.-Col. Sardar Kishen Singh Sardar Bahadur
 Major Walter Fellowes Cowan Gilchrist
 Lieut. Francis Beta Davern
 Commander A. G. Bingham
 Lieut.-Col. Frederick William Gee, I.M.S.
 Lieut.-Col. R. E. A. Hamilton
 Temp. Lieut.-Col. Llewellyn William Lewis
 Lieut.-Col. George McPherson
 Major Norman Emil Henry Scott, I. M. S.
 Major W. R. J. Scroggie, I. M. S.
 Captain Stewart George Cromartie Murray
 Capt. Arthur Mowbray Berkeley
 Guy Sutton Bocquet
 Lieut.-Col. Cuthbert Vivian Bliss
 Colin Campbell Garbett
 Lieut.-Col. Wyndham Madden Wood
 John Brown Sydney Thubron
 L. S. Steward O'Malley
 Provash Chandra Mitter
 James George Jennings
 Samuel Perry O'Donnell
 E. M. Cook
 Christian Tindall
 Arthur Innes Mayhew
 William Crooke
 Vincent Arthur Smith
 Austin Low
 Lieut.-Col. Andrew Alexander Irvine
 Hubert Digby Watson
 George Ernle Chatfield
 Lieut.-Col. John Telfer Calvert
 Charles Gilbert Rogers
 Bernard D'Olier Darley
 Thomas Reed Davy Bell
 Walter Francis Perree
 Bertram Beresford Osmaston
 Major John Hanna Murray
 The Rev. Dr. William Skinner
 Brig.-General Herbert Augustus Iggulden
 Brev. Lieut.-Col. Richard Stukeley St. John
 Lieut.-Col. S. S. W. Paddon
 Lieut.-Col. Walter Mason

William Alfred Rae Wood
 John Carlos Kennedy Peterson
 Lieut.-Col. Andrew Louis Charles McCormick
 Lieut.-Col. F. E. Swinton
 Lieut.-Col. J. C. Lamont
 Capt. Charles James Cope Kendall
 Lieut.-Col Muhammad Afzal Khan
 Ernest Albert Seymour Bell
 Major Francis Richard Soutter Gervers
 Colin John Davidson
 Francis John Preston
 Albert Harlow Silver
 Frederick William Hanson
 Nawab Malik Khuda Baksh Khan, Tiwana
 Khan Bahadur Mania Baksh
 Colonel Vindeshri Prasad Singh
 Sardar Lakhamgouda Basava Prabhu Sir Desai
 Lieut.-Col. W. W. Clemesha, I.M.S.
 Purshotamdas Thakurdas
 Khwaja Yusuf Shah
 N. E. Majoribanks
 A. C. Chatterjee
 R. D. Bell
 Lala Ram
 Lieut.-Col. H. C. Beadon
 H. C. Barnes
 H. Clayton
 C. Bevan-Petman
 F. A. M. H. Vincent
 R. Clarke
 M. J. Cogswell
 Lieut.-Col. W. D. Sutherland
 Lieut.-Col. J. J. Bourke
 Lieut.-Col. J. Stephenson
 H. Haines
 R. S. Hole
 C. N. Wadia
 E. Teichman
 D. Clouston
 C. A. Bell
 Raja Jogendra Narayan Ray
 Narendra Nath Sen
 W. J. Bradshaw
 Lieut.-Col. R. A. Needham
 J. Crosby
 C. A. Innes
 F. P. J. Wodehouse
 Captain E. I. M. Barrett
 S. F. Stewart
 Sheikh Abdulla Bin Jasim, Ruler of Qatar
 (Persian Gulf)
 Sirdar Bahadur Sundar Singh Majithia
 H. Moncrieff Smith, I.C.S.
 F. St. John Gebbie
 Pir Baksh Walad Mian Muhammad
 Seshadri S. Ayyangar
 F. A. A. Cowley
 F. W. Richey
 F. W. Woods
 A. T. Holme, I.C.S.
 G. C. Sim, I.C.S.
 Lieut.-Col. C. S. Smith
 Lieut.-Col. F. R. Nethersole, I.A.
 R. C. Troup
 M. A. Thompson
 K. B. W. Thomas
 J. A. Stevens, I.C.S.
 D. A. Thomson
 A. Brebner
 V. Dawson, I.C.S.
 C. Anderson
 Colonel Thakur Sadul Singh
 Saiyid Nur-ul-Huda, ZaminJar, Bihar and
 Orissa.

Rao Bahadur Y. T. Mirikar, Sardar of the Deccan
 Rai Bahadur Baikuntha Nath Sen

OFFICERS OF THE ORDER.

Secretary, Sir J. B. Wood

Registrar, Col. Sir Douglas Dawson

The Imperial Order of the Crown of India.

This Order was instituted Jan. 1, 1878 and for a like purpose with the simultaneously created Order of the Indian Empire. It consists of the Queen and Queen Mother with some Royal Princesses, and the female relatives of Indian Princes or of persons who have held conspicuous offices in connection with India. Badge, the royal cipher in jewels within an oval surmounted by an Heraldic Crown and attached to a bow of light blue watered ribbon, edged white. Designation, the letters C. I.

Sovereign of the Order.

THE KING-EMPEROR OF INDIA.

Ladies of the Order (C. I.)

Her Majesty The Queen
 H. M. Queen Alexandra
 H. M. the Queen of Norway
 H. R. H. the Princess Royal
 H. R. H. the Princess Victoria
 H. R. H. the Princess Christian of Scheleswig-Holstein
 H. R. H. the Princess Louise (Duchess of Argyll)
 H. R. H. Princess Henry of Battenberg
 H. I. and R. H. the Dowager Duchess of Saxe-Coburg and Gotha
 H. R. H. the Duchess of Albany
 H. R. H. the Duchess of Cumberland
 H. R. H. the Princess Frederica Baroness of von Pawel-Rammingen
 H. R. H. the Dowager Grand Duchess of Mecklenburg-Strelitz
 H. I. & R. H. the Grand Duchess Cyril of Russia
 H. R. H. the Hereditary Princess of Hohenlohe-Langenburg
 B. R. H. the Crown Princess of Sweden
 H. R. H. the Princess Patricia of Connaught
 H. R. H. the Princess Victoria Elizabeth
 Augustine Charlotte, Hereditary Princess of Saxe-Meiningen
 H. H. the Princess Victoria of Schleswig-Holstein
 H. H. the Princess Marie-Louise of Schleswig-Holstein
 Baroness Kinloss
 Dowager Countess of Mayo
 Lady Jane Emma Crichton
 Dowager Countess of Lytton
 Dowager Baroness Lawrence
 Lady Temple
 Dowager Baroness Napier of Magdala
 Lady Grant Duff
 Dowager Marchioness of Dufferin and Ava
 Lady Randolph Spencer-Churchill
 Baroness Reay
 H. H. Maharani of Cooh-Behar
 Marchioness of Lansdowne

Baroness Harris
 H. H. Maharani of Gwalior
 Constance Mary Baroness Wenlock
 H. H. Maharani Sahib Chimna Bai Gackwar
 H. H. Rani Sahib of Gondal
 H. H. the Dowager Maharani of Mysore
 Lady George Hamilton
 H. H. the Maharani Sahiba of Udaipur
 Alice, Baroness Northcote

Nora Henrietta; Countess Roberts
 Amelia Maria, Lady White
 Mary Katherine, Lady Lockhart
 Baroness Amptill
 The Lady Willingdon
 Countess of Minto
 Marchioness of Crewe
 H. H. Begum of Bhopal

THE KAISAR-I-HIND MEDAL.

This decoration was instituted in 1900, the preamble to the Royal Warrant—which was amended in 1901 and 1912—being as follows:—"Whereas We, taking into Our Royal consideration that there do not exist adequate means whereby We can reward important and useful services rendered to Us in Our Indian Empire in the advancement of the public interests of Our said Empire, and taking also into consideration the expediency of distinguishing such services by some mark of Our Royal favour: Now for the purpose of attaining an end so desirable as that of thus distinguishing such services aforesaid, We have instituted and created, and by these presents for Us, Our Heirs and Successors, do institute and create a new Decoration." The decoration is styled "The Kaisar-i-Hind Medal for Public Service in India" and consists of two classes. The Medal is an oval shaped Badge or Decoration—in gold for the First Class and in silver for the Second Class—with the Royal Cypher on one side and on the reverse the words "Kaisar-i-Hind for Public Service in India;" it is suspended on the left breast by a dark blue ribbon.

Recipients of the 1st Class.

Abdus Samad Khan of Rampur
 Advani, M. S.
 Ahmad, Khan Bahadur Qazi Khalil-ud-Din
 Alexander, A. L.
 Allnut, The Rev. Samuel Scott
 Amarchand, Rao Bahadur Ramnarayan
 Amptill, Margaret, Baroness
 Anderson, The Rev. H.
 Ashton, Albert Frederick
 Balfour, Dr. Ida
 Ball, H. M.
 Barber, Benjamin Russell
 Barnes, Major Ernest
 Basu, Sir Kailas Chandra, Rai Bahadur
 Beatty, Francis Montagu Algernon
 Beck, Miss Emma Josephine
 Bell, Lt.-Col. Charles Thornhill
 Benson, Lady
 Bentley, Dr. Charles Albert
 Bhandari, Rai Bahadur Gopal Das
 Bikanir, Maharaja of
 Bingley, Major General Alfred
 Biwalkar, Sardar Parashram Krishnarao
 Bonig, Max Carl Christian
 Booth-Tucker Frederick St. George de Lautour
 Bosanquet, Oswald Vivian
 Bott, Captain R. H.
 Bramley, Percy Brooke
 Bray, Denys DeSaumarez
 Broadway, Alexander

Brown, Rev. A. E.
 Brown, Rev. W. E. W.
 Brunton, James Forest
 Buchanan, Rev. John
 Burn, Richard
 Burnett, General Sir Charles John
 Cales Dr. C. C.
 Calnan, Denis
 Campbell, Colonel Sir Robert Neil
 Campion, John Montriou
 Carleton, Marcus Bradford
 Carlyle, Lady
 Carmichael, Lady
 Carter, Edward Clark
 Castor, Lieut.-Col. R. H.
 Chandra, Rai Bahadur Hari Mohan
 Chapman, R. A. B.
 Chatterton, Alfred
 Chaudhuri, Raja Sarat Chandra Rai
 Chetty, Dewan Bahadur K. P. Puttanna
 Chinai, Ardeshir Dinshaji
 Chitnavis, Shankar Madho
 Coldstream, William
 Comley, Mrs. Alice
 Copeland, Theodore Benfey
 Cousens, Henry
 Cox, Arthur Frederick
 Crawford, Francis Colomb
 Crouch, H. U.
 Cullen, Rev. Dr. Peter
 Currimbhoy, Mahomedbhoy
 Dane, Lady
 Darbhanga, Maharaja of
 Das, Ram Saran
 Davies, Arthur
 Davies, Mrs. Edwin
 Davis, Miss Gertrude
 Dawson, Brevet-Colonel Charles Hutton
 Dayal Seth Jay
 Deane, Lieutenant-Colonel Herbert Edward
 deLotbiniere, Lieutenant-Colonel Alain C. Joly
 Dewas (Junior Branch), Maharaja of
 Dhar, Her Highness the Rani Sahiba Luxmiba
 Pavar of
 Dhingra, Dr. Behari Lal
 DuBern, Amedee George
 DuBern, Jules Emile
 Dyson, Colonel Thomas Edward
 Earle, The Hon'ble Sir Archdale
 Ewing, The Rev. Dr. J. C. R.
 Ferard, Mrs. Ida Margaret
 Firth, Mrs. E. J. (with Gold Bar)
 Fosbrooke, Mrs. M. E. A.
 Francis, Edward Belcham
 Gandhi, Mohandas Karamchand
 Ghosal, Mr. Jyotsnanath
 Glazebrook, N. S.
 Glenn, Henry James Heamey
 Gonzaga, Rev. Mother
 Graham, The Rev. John Anderson

Graham, Mrs. Kate
 Grattan, Colonel Henry William
 Guilford, The Rev. E. (with Gold Bar)
 Gwalior, Maharaja of
 Gwyther, Lieut.-Colonel Arthur
 Hahn, The Rev. Ferdinand
 Haig, Lieutenant-Colonel Patrick Balfour
 Hall, Harold Fielding Patrick
 Hamilton, Major Robert Edward Archibald
 Hanson, The Rev. O.
 Harvest, Lieut.-Colonel Herbert de Vere
 Hatch, Miss Sarah Isabel
 Heyland, J. S.
 Hildesley, The Rev. Alfred Herbert
 Hodgson, Edward Marsden
 Hoeck, Rev. Father L. V.
 Hogan, W. J. Alexander
 Holderness, Sir Thomas William
 Home, Walter
 Howard, Mrs. Gabrielle Louise Caroline
 Hume, The Rev. R. A.
 Husband, Major James
 Hutchinson, Sir Sydney Hutton Cooper
 Hutchinson, Major William Gordon
 Hutwa, The Maharani Jnan Manjari Kuari of
 Hydari, Mrs. Amina
 Irvine, Lieutenant-Colonel Thomas Walter
 Ismail, Muhammad Yusuf
 Ives, Harry William Maclean
 Jackson, Rev. James Chadwick
 James, Lieutenant-Colonel Charles Henry
 Jankibai
 Josephine, Sister
 Kapur, Raja Ban Bihari
 Kelly, The Rev. E. W.
 King, Mrs. D.
 Kirkpatrick, Clarence
 Klopsch, Dr. Louis
 Knox, Lady
 Ko, Taw Sein
 Kothari, The Hon'ble Mr. Jehangir Hormusji
 Lamb, The Hon'ble Sir Richard Amphlett
 Lindsay, D'Arcy
 Ling, Miss Catharine Frances
 Lovett, The Hon'ble Mr. Harrington Verney
 Luck, Wilfred Henry
 Lukis, Lady
 Lyall, Frank Frederick
 Lyons, Surgeon-General Robert William Steele
 MacLean, Rev. J. H.
 Macwatt, Lieutenant-Colonel Robert Charles
 Madhav Rao, Vishwanath Patankar
 Mahomed Ajmal Khan, Hakim, Hazik-ul-Mulk
 Malegaon, Raje of
 Malvi Tribhuvandas Narottamdas
 Maneckchand, Seth Motilal
 Mann, Dr. Harold
 Manners-Smith, The Hon'ble Mr. Francis
 St. George
 Mary of St. Paula, Rev. Mother
 Mayes, Herbert Frederick
 McCarrison, Major Robert
 McCloghry, Colonel James
 Millard, Walter Samuel
 Miller, The Rev. William
 Minto, Mary Caroline
 Monahan, Mrs. Ida
 Morgan, George
 Muir Mackenzie, Lady Therese
 Naidu, Mrs. Sarojini
 Nanak Chand
 Nariman, Dr. Temulji Bhikaji

Narsingharh, Her Highness the Rani Shiv Kunwar Sahiba of
 Nepalia, Rani of Tehri
 Neve, Dr. Arthur
 Neve, Dr. Earnest
 Newton, Dr. Henry Martyn
 Nichols, the Rev. Dr. Charles Alvord
 Nicholson, Sir Frederick Augustus
 Nisbet, John
 Noyce, William Florey
 O'Byrne, Gerald John Evangelist
 Oldham, Charles Evelyn Arbuthnot William
 O'Donnell, Dr. Thomas Joseph
 O'Meara, Major Eugene John
 Pandit Sitaram Narayan
 Panna, Maharani of
 Paranjpye, Raghunath Purshottam
 Pears, S. D. A. D.
 Pedley, Dr. Thomas Franklin
 Pennell, Mrs. A. M.
 Pestonji, Khan Bahadur D. C.
 Phelps, Edwin Ashby
 Pickford, Alfred Donald
 Pitcher, Colonel Duncan George
 Pittendrigh, Rev. G.
 Plant, Captain William Charles Trew Gray
 Gambier
 Platt, Dr. Kate
 Pollen, Dr. J.
 Poynder, Lieut.-Colonel John Leopold
 Prasad, Lt.-Col. Kanta
 Price, John Dodds
 Ramabai, Mrs. Pandita
 Rani Murari Debi of Binga
 Reed, Miss M.
 Reid, Frederick David
 Reynolds, Leonard William
 Richmond, Mr. Thomas
 Rivington, The Rev. Canon, C. S.
 Roberts, Dr. N. G.
 Robson, Dr. Robert George
 Rondy, The Very Rev. The Abbe Noel
 Rost, Lt.-Col. Ernest Reinhold
 Row, Dr. Raghavendra
 Roy, Babu Harendra Lal
 Roy, Rao Jogendra Narayan
 Sailana, Raja of
 Samthar, Maharaja of
 Sanderson, Lady
 Scott, Mary H. Harriot
 Scudder, Rev. Dr. Lewis Rousseau
 Scudder, Miss Ida
 Sell, The Rev. Canon Edward
 Semple, Lieut.-Colonel Sir David
 Sharp, Henry
 Sharpe, Walter Samuel
 Shepherd, Rev. James
 Sheppard, Mrs. Adeline B.
 Sheppard, William Didsbury
 Shillidy, the Rev. John
 Shore, Lieut.-Colonel Robert
 Shoubridge, Major Charles Alban Gros
 Simon, The Rev. Mother
 Singh, Munshi Ajit
 Singh, Raja Bhagwan Bakhsh
 Singh, Rai Hira
 Singh, Raja Kamaleshwari Pershad
 Sinha, Purnendu Narayan
 Sita Bai
 Skinner, The Rev. Dr. William
 Skreftsrud, The Rev. Larsorsen
 Smith, Lieut.-Colonel Henry
 Sorabji, Miss Cornelia

Southon, Major Charles Edward
 Spence, Christina Philippa Agnes
 St. Leger, William Douglas
 St. Lucie, Reverend Mother
 Stanes, Robert
 Stokes, Dr. William
 Sukhdeo Prasad, Pandit
 Surat Kuar, Rani Sahiba
 Tabard, The Rev. Antoine Marie
 Talati, Edalji Dorabji
 Taylor, The Rev. George Pritchard
 Taylor, Dr. Herbert F. Lechmere
 Thakral, Lala Mul Chund
 Thomas, The Rev. Stephen Sylvester
 Thurston, Edgar
 Tilly, Harry Lindsay
 Tindall, Christian
 Tucker, Major William Hancock
 Turner, Dr. John Andrew
 Tyndale-Biscoe, The Rev. Cecil Earle
 Tyrrell, Major Jasper Robert Joly
 Vandyke, Frederick Reginald
 Van Hoeck, Rev. Father Louis, S.J.
 Vaughan, Lieut.-Colonel Joseph Charles Staelke
 Venugopala, Raja Bahadur
 Vernon, Mrs. Margaret
 Victoria, Sister Mary
 Wadhwan, The Rani Sahib Sita Bai of
 Wadia, Sir Hormasji Ardeshir
 Wagner, Rev. Paul
 Wake, Lieut.-Colonel Edward St. Aubyn
 (with Gold Bar)
 Wakefield, George Edward Campbell
 Walker, Lady Fanny
 Walter, Major Albert Elijah
 Wanless, Mr. W. J.
 Ward, Major Ellacott Leamon
 Waterhouse, Miss Agnes May
 Westcott, The Rt. Rev. Dr. Foss.
 Wheeler, The Rev. Edward Montague
 Whitehead, Mrs. J.
 Whitton, The Rev. David
 Wilkins, Colonel James Sutherland
 Wilkinson, Lieut.-Colonel Edmund
 Willingdon, The Lady
 Wilson-Johnston, Joseph
 Winter, Edgar Francis Latimer
 Wood, Arthur Robert
 Young, The Rev. John Cameron
 Younghusband, Arthur Delaval
 Younghusband, Lieut.-Col. Sir Francis Edward

Recipients of the 2nd Class

Abul Fath Moulvi Saiyed
 Abdul Ghani
 Abdul Hussain, Mian Bhai
 Abdul Kadir
 Abdul Majid Khan
 Abdur Rahim
 Abdur Razzak Khan, Subadar
 Achariyar, Mrs. Sita Thiruvankata
 Achariyar, P. T.
 Advani, Motiram Showkiram
 Advani, Mrs. Motiram
 Agha Mohamed Khalil-Bin-Mohamed Karim
 Ahmad, Mr. Mukhtar
 Ali Shabash. Shaikh
 Allen, Miss Fannie
 Allen, Rev. Frank Van
 Amar Nath, Lala
 Amar Singh
 Anastasie, Sister
 Anderson, Andrew

Andrew, The Rev. Adam
 Anscomb, Major Allen Mellers
 Antia, Jamshedji Merwanji
 Ashton, Dr. Robert John
 Askwith, Miss Anne Jane
 Atkinson, John William
 Atkinson, Lady Constance
 Augustin, The Rev. Father
 Aung, Mrs. Hla
 Aziz Husain, Khan Sahib Mir
 Badri Parshad
 Baker, Honorary Major Thomas
 Ball, Miss Marguerite Dorothy
 Banerji, Professor Jamini Nath
 Banks, Dr. Charles
 Bapat, Risaldar Sadashiva Krishna
 Barclay, Mrs. Edith Martha
 Bardsley, Miss Jane Blissett
 Barnett, Miss Maude
 Barstow, Mrs. Melaine
 Barton, Mrs. Sybil
 Baw, Maung Kan
 Bawden, Rev. S. D.
 Bayley, Lieut.-Colonel Edward Charles
 Beaton-Bell, Nicholas Dodd
 Beg, Mirza Kalich Beg Fridun
 Best, James Theodore
 Beville, Lieut.-Colonel Francis Granville
 Bhagwandas, Bai Zaoerbai
 Bhajan Lal
 Bhan, Lala Udbai
 Bhide, Raoji Janardhan
 Bhutt, Chhotelal Goverdhan
 Bihari Lal
 Bisheshwar Nath, Lala
 Bissett, Miss Mary Ronald
 Biswas, Babu Anonda Mohan
 Blackham, Lieut.-Colonel Robert James
 Blackwood, John Ross
 Blake, The Rev. William Henry
 Blenkinsop, Edward Robert Kaye
 Booth, Miss Mary Warburton
 Bolster, Miss Anna
 Borrah, Balinarayan
 Bose, Miss Kiroth
 Bose, Miss Mona
 Botting, W. E.
 Bowen, Griffith
 Brahmanand, Pundit
 Brander, Mrs. Isabel
 Bray, Lady
 Bremner, Lt.-Col. Arthur Grant
 Brock, Miss Lilian Winifred
 Brough, The Rev. Anthony Watson
 Browne, Charles Edward
 Brown, Dr. Edith
 Burt, Bryce Chudleigh
 Cain, Mrs. Sarah
 Caleb, Mrs. M.
 Campbell, The Rev. Andrew
 Campbell, Miss Gertrude Jane.
 Campbell, Miss Kate
 Campbell, Miss Susan
 Campbell, Miss Mary Jane
 Campbell, The Rev. Thomas Vincent
 Carmichael, Miss Amy Wilson
 Carr, Miss Emma
 Carr, Thomas
 Cassels, Mrs. Laura Mary Elizabeth
 Catherine, Sister
 Cattell, Major Gilbert Landale
 Cecilia, Sister Fannie
 Chamberlain, The Rev. William Isaac

Chandler, The Rev. John Scudder
 Chaudhuri, Purna Chundra
 Chaudhuri, P. S. R.
 Chirag Din, Seth
 Chitale, Ganesh Krishna
 Churchward, P. A.
 Chye, Leong
 Clancey, John Charles
 Clark, Herbert George
 Clerke, Honorary Major Louis Arthur Henry
 Clutterbuck, Peter Henry
 Coombs, George Oswald
 Coombes, Josiah Waters
 Cooper, Dosabbai Pestonji, Khan Bahadur
 Correa, Miss Marie
 Corthorn, Miss Alice
 Corti, The Rev. Father Fanshi, S.J.
 Cottle, Mrs. Adela
 Cox, Mrs. E.
 Coxon, Stanley William
 Croix, Sister Paul de La
 Crow, Charles George
 Cumming, James William Nicol
 Cummings, The Rev. John Ernest
 Cutting, Rev. William
 DaCosta, Miss Zilla Edith
 Dadabhoy, Mrs. Jerbanoo
 Dalrymple-Hay, Charles Vernon
 Dann, Rev. George James
 Das, Ram, Lala
 Das, Mathura, Lala
 Das, Niranjan
 Datta, Dr. Dina Nath Pritha
 Davies, Miss Harriet
 Davis, Miss B. E.
 Dawe, Miss Ellen
 Dawson, Alexander Thomas
 Dawson, Mrs. Charles Hutton
 Deane, George Archibald
 Deodhar, Gopal Krishna
 Deoji, Hazi Ahmed, Khan Sahib
 deKantzow, Mrs. Mary Aphrasia
 Desmond, J.
 Devi, Bibi Kashmiri
 De Wachter, Father Francis Xavier
 Dewes, Lieut.-Colonel Frederick Joseph
 Dexter, T.
 Dharm Chand, Lala
 Dilshad Begum
 Dip Singh, Thakur
 Dodson, Dr. E. I.
 Douglas, The Rev. John
 Drysdale, Mrs. Christiana Mary
 Dun, Maung Ne
 Dundas, Charles Lawrence
 Dunlop, Alexander Johnstone
 Durjan Singh, Thakur
 Dutta, Mehta Harnam
 Duval, Mrs. Ethel Aldersey
 Dwane, Mrs. Mary
 Eagles, Thomas Cazaly
 Eagles, T.C.
 Eaglesome, George
 Edgell, Lieut.-Colonel Edward Arnold
 Edward, R.
 Elwes, Mrs. A.
 Emanuel, Mrs.
 Evans, The Rev. John Ceredig
 Evans, Miss Josephine Annie
 Faridoonji, Mrs. Hilla
 Farrer, Miss Ellen Margaret
 Farzand-i-Ahmad, Khan Bahadur, Kazi Saiyid
 Fernandez, A. P.

Ffrench, Lieut.-Colonel Thomas
 Flashman, Thomas Charles
 Fleming, James Francis
 Fletcher, Miss
 Flint, Dr. E.
 Forman, The Rev. Henry
 Fox, Alfred Charles
 Frances, Sister Jane
 Fraser, Robert Thomson
 Fyson, Hugh
 Gajjar, Mrs. Shivagauri
 Gaibibai, Bai
 Gandhi, Mr. Pestonji Jamsetji
 Garthwaite, Liston
 Gateley, Thomas Joseph
 George, Miss Jessie Eleanor
 Gilman, Edward P. Reuben
 Godfrey, Thomas Leonard
 Goenka, Baijnath
 Goldsmith, The Rev. Canon Malcolm George
 Goodbody, Mrs.
 Gorman, Patrick James
 Goswami, Sri Sri Naradev Dakhinpat Adhikar
 Gowardhandas, Chatrabhuj
 Govind Lal, Lala
 Grant, Lieut.-Colonel John Weynis
 Grant, Mrs., nee Miss Lilian Blong
 Grant, Miss Jean
 Grant, The Rev. John
 Grant, Miss Maria Alice
 Gray, Mrs. Hester
 Gray, Commissary William David
 Greany, Peter Mawe
 Greenfield, Miss R.
 Griessen, Albert Edward Pierre
 Gulliford, The Rev. Henry
 Gumbley, Mr. Douglas
 Gune, Trimbak Raghunath
 Gyi, Maung Pet
 Hadow, Rev. Frank Burness
 Haiyati Malik
 Hanrahan, W. G.
 Harding, Miss C.
 Harrison, Henry
 Harrison, Mrs. M. F.
 Harrison, Robert Tullis
 Hart, Miss Louisa
 Harvey, Miss Rose
 Haworth, Major Lionel Berkeley Holt
 Hayes, Miss Mary Lavinia
 Hayes, Captain P.
 Henderson, Miss Agnes
 Hickman, Mrs. A.
 Hicks, Rev. G. E.
 Higgins, Andrew Frank
 Hill, Elliott
 Hill, Henry Francis
 Hoff, Sister, W. J. K.
 Hoffman, The Rev. Father John, S.J.
 Holbrooke, Major Bernard Frederick Rope
 Holden, Major Hyla Napier
 Holland, Dr. Henry Tristram
 Homer, Charles John
 Hoogewerf, Edmund
 Hope, Dr. Charles Henry Standish
 Hopkyns, Mrs. E.
 Houghton, Henry Edward
 Hughes, Frank John
 Hughes, Miss Lizbeth Bell
 Hunter, Honorary Captain James
 Hutchison, Dr. John
 Ibrahim, Moulvi Muhammad
 Ihsan Ali

Inglis, Mrs. Ellen
 Jackson, Mrs. K.
 Jackson, Mrs. Emma
 Jaijee Bai (Mrs. Petit)
 Jainath, Atal Pandit
 Jambusarvala, A. Hargovandas
 Jivanandan
 Joglekar, Rao Bahadur Ganesh Venkatesh
 John, Rev. Brother
 Johnston, Augustus Frederick
 Johnstone, Mrs. Rosalie
 Jones, The Rev. John Peter
 Jones, The Rev. Robert
 Jones, The Rev. John Pengwern
 Joshi, Mr. Keshavlal Durgashankar
 Joshi, Narayan Malhar
 Joshi, Trimbak Waman
 Joss, Miss F.
 Joti Prasad, Lala
 Joti Ram
 Judd, C. R.
 Jugaldas, M.
 Jung, Sher, Khan Bahadur
 Jwala Prasad, Mrs.
 Jwala Singh, Sirdar
 Kalubava, Azam Kesarkhan
 Kanow, Yasuf
 Kapadia, Miss Motibai
 Karve, Dhondo Keshav
 Keene, Miss H.
 Kelavkar, Miss Krishnabai
 Kelly, Claude Cyril
 Kelly, Miss Eleanor Sarah
 Ker, Thomas
 Kharshedji, Miss S. K.
 Khujoorina, Nadirshah Nowrojee
 Kidar Nath, Lala
 King, Robert Stewart
 Kirloskar, Lakshman Kashinath
 Kitchin, Mrs. M.
 Knollys, Major Robert Walter Edmond
 Knox, Major Robert Welland
 Kothewala, Mulla Yusuf Ali
 Kreyer, Lieut.-Colonel Frederick August
 Christian
 Kugler, Miss Anna Sarah
 Kumaran, P. L.
 Kyaw, Maung
 Lajja Ram
 Lang, John
 Langhorne, Frederick James
 Lankester, Dr. Arthur Colborne
 Latham, Miss J. L.
 Laughlin, Miss L. H. M.
 Lawrence, Captain Henry Rundle
 Lawrence, Henry Staveley
 Lear, A. M.
 Leslie-Jones, Leycester Hudson
 Lloyd, Miss Elizabeth
 Locke, Robert Henry
 Low, Charles Ernest
 Luck, Miss Florence Ada
 Lund, George
 MacAlister, The Rev. G.
 Mackenzie, Alexander McGregor
 Mackenzie, Howard
 Mackinnon, Miss Grace
 Mackenzie, Miss Mina
 MacKellar, Dr. Margaret
 Macleod, Lieut.-Colonel John Norman
 Macnaghten, Hon. Florence Mary
 Macphail, Miss Alexandrina Matilda
 Macphail, The Rev. James Merry

Macrae, The Rev. Alexander
 Madan, Mr. Rustamji Hormasji
 Maddox, Lieut.-Colonel Ralph Henry
 Madeley, Mrs. E. M.
 Mahadevi, Srimati
 Mahommed Allanur Khan
 Maiden, J. W.
 Maitra Babu Bhuban Mohan
 Mallik, Sashi Bhushan
 Maracan, Esmail Kadir
 Margaret Mary, Sister
 Marie, Sister
 Marler, The Rev. Frederick Lionel
 Mary of St. Vincent, Sister
 Mary, Sister Eleanor
 Masani, Rustam Pestonji
 Matthews, Rev. Father
 McCowen, Oliver Hill
 McDonald, Joseph James
 McGregor, Duncan
 McKenzie, Miss Alice Learmouth
 Mead, Rev. Cecil Silas
 Mehta, Vaikuntraï Lalubhai
 Mill, Miss C. R.
 Mitcheson, Miss.
 Mitter, Mrs.
 Moens, Mrs. Agnese Swettenham
 Mohammed Khan
 Moitra, Akhoy Kumar
 Moore, Nursing Sister Dora Louisa Truslove
 Moore, Miss Eleanor Louisa
 Morgan, Miss Elizabeth Ellen
 Morris, Major Robert Lee
 Motilal, Seth of Piparia
 Mount, Captain Alan Henry
 Moxon, Miss Lais
 Mozumdar, Jadu Nath
 Mudali, Valappakkam Daivasigomoni Than-
 davaroyan
 Mudalliar, Bangalore Perumal Annaswami
 Muhammad Yusuf, Shams-Ul-Ulama, Khan
 Bahadur
 Mukharji, Babu Jogendra Nath
 Mukharji Babu Nagendra Nath
 Muller, Miss Jenny
 Murli Dhar
 Murphy, Edwin Joseph
 Nabi Baksh
 Nag, Mrs. Sasi Mukhi
 Naimullah, Mohamed
 Naoum Abbo
 Napier, Alan Bertram
 Narain, Har
 Narayanjee Laljee
 Narayan Pershad, Babu
 Narayan Singh, Sardar
 Nariman, Khan Bahadur Manekji Kharsedji
 Narpal Singh, Babu
 Nasrulla Khan, Mirza
 Norris, Miss Margaret
 O'Maung Po
 O'Brien, Major Edward
 O'Connor, Brian Edward
 O'Hara, Miss Margaret
 Old, Frank Shepherd
 Orman, Honorary Captain Charles Henry
 Orr, Adolphe Ernest
 Orr, James Peter
 Orr, Mrs. Amy
 Outram, The Rev. A.
 Owen, Major Robert James
 Owen, C. B.
 Pal, Babu Barada Sundar

Palin, Major Randle Harry
 Pandit, Vasudeo Ramkrishna
 Parbati Bai
 Park, The Rev. George W.
 Parker, Miss Ada Emma
 Parsons, Ronald
 Patch, Miss K.
 Patel, Barjorji Dorabji
 Patel, Jeona
 Pathak, Vithal Narayan
 Pathak, Ram Sahai
 Paterson, Miss Rachel
 Patrick, Sister
 Penn, The Rev. W. C.
 Perroy, Rev. Father
 Pershad, Pundit Thakur
 Peters, Lieut.-Colonel Charles Thomas
 Petigara, R. J.
 Pettigrew, The Rev. William
 Phadke, V. K.
 Phailbus, Miss Rose Margaret
 Phelps, Mrs. Maude Marion
 Philip, Mrs. A. J.
 Pierce, Miss Ada Louise
 Pillay, Chinnappa Singaravalu
 Pinney, Major John Charles Digby
 Pinto, Miss Preciosa
 Plowden, Lt.-Col. Trevor Chichele
 Powell, John
 Prabhu, Anantrao Raghunath
 Prasad, Capt. Tulsi of Nepal
 Pribhdas Shevakram
 Price, The Rev. Eustace Dickinson
 Prideaux, Frank Winckworth Austice
 Purshotamdas Thakurdas
 Pyo, Maung Tet
 Rai, Babu Ram Kinkar
 Raikes, Mrs. Alice
 Rait, Miss Helen Anna Macdonald
 Raj Bahadur, Pandit
 Rajendra Pal, Tika Rani
 Ram, Mr. Bhagat
 Ramchandra, Daji
 Ramgopal, Mallani, Seth
 Ram Singh, M.V.O.
 Ranade, Mrs. Ramabai
 Ranjit Singh
 Rattan Chand
 Rattansi Mulji
 Raushan Lal
 Ray, Babu Sarat Chandra
 Ray, Harendra Nath
 Raza Ali Khan, Sardar
 Reed, Lady.
 Richardson, Mrs. Catherine Stuart

Rita, Stiffani Edward
 Roberts, Captain Charles Stuart Hamilton
 Robinson, James
 Robinson, Lieut.-Colonel William Henry Banner
 Roche, Captain Cyril E. A. Spencer
 Roe, Colonel Cyril Harcourt
 Roe, Mrs. Edith Mary
 Rukhmabai, Dr.
 Rukhmina Singh, Miss
 Rulach, Rev. George Bernard
 Rustomji Faridoonji
 Rutherford, Miss Mary Elizabeth
 Sadiq, Shams-ud-din
 Sadlier, A. W. Woodward
 Sahai, Ram
 Sahan Ram Kali
 Sahay, Lala Deonath
 Saint Monica, The Rev. Mother
 Salkield, Tom
 Samarth, Wasudeo Mahadeo
 Samuels, Joseph
 Savidge, Rev. Frederick William
 Schultze, The Rev. Frederick Volkomor Paul
 Scotland, Lieut.-Colonel David Wilson
 Shah, Babu Lal Behari
 Shah, Mohamed Kamal.
 Shah, Mohammad Nawaz
 Shah, Reverend Ahmad
 Shamnath Rai Bahadur
 Shaw, Mrs. Hawthorne
 Sheard, Mr. E.
 Sheore, Raghunath Balwant
 Shircore, William
 Shyam Rikh, Raja Francis Xavier
 Shyam Sunder Lal
 Simecox, Arthur Henry Addenbrooke
 Simkins, Charles Wylkins
 Simpson, Miss J. P.
 Simon, Sister M.
 Sinclair, Reginald Leahy
 Singh, Apji Dhul
 Singh, Babu Harnath
 Singh, Makkhan
 Singh, Babu Ramdhari
 Singh, Bhai Takhut
 Singh, Risaldar Major, Hanwant
 Sir Ram Kunwar, Thakurain
 Singh, Sitla Baksh
 Singh, Subadar Sher
 Singh, Sohan
 Singho, Miss L. N. V.
 Smith, Miss A. C.
 Smith, Miss Ellen
 Smith, The Rev. Frederick William Ambery
 Smith, Mrs. Henry

Sohan Singh	Thomssen, The Rev. G. Nicholas
Sommerville, The Rev. Dr. James	Thorn, Miss Bertha
Starte, Oliver Harold Baptist	Thoy, Herbert Dominick
Steel, Alexander	Timothy, Samuel
Steele, The Rev. John Ferguson	Tomkins, Lionel Linton
Stephens, John Hewitt	Tudball, Miss Emma
Stephens, Mrs. Grace	Turner, Mrs. Vera
Stevens, Mrs. (Ethel)	Udipi Rama Rao
Stevenson, Surgeon-General Henry Wickham	Umar Khan, Malik Zorawar Khan
Stewart, Major Hugh	Vajifdar, Mrs. Hormusji Maneckji
Stewart, Mrs. Lilian Dorothea	Vale, Mrs. K.
Stewart, Thomas	Vaughan-Stevens, Dudley Lewis
St. Joseph, J. D.	Vijayaraghava Acharyar
Strip, Samuel Algernon	Vines, Thomas Humphrey
Stuart, Dr. (Miss) Gertrude	Visvesvaraya Mokshagundam
Sultan Ahmed Khan	Wait, Robert William Hamilton
Sunder Lal	Wakefield, George Edward Campbell
Sundrabai, Bai	Walayatullah, Khan Bahadur Hafiz Muhammad
Swain, Mrs. Walker	Walewalker, P. Baburao
Swainson, Miss Florence	Waller, Frederick Chighton
Swiss, Miss Emily Constance	Wantless, Dr. William James
Taleyarkhan, Mr. Manekshah Cawasha	Wares, Donald Horne
Talib Mehdi Khan, Malik	Webb-Ware, Mrs. Dorothy
Tambe, Dr. Gopal Rao Ramchandra	Weighell, Miss Anna Jane
Tarafdar, Mr. S. K.	Western, Miss Mary Priscilla
Tarapurwalla, Fardunji Kuvarji	White, Miss J.
Taylor, Rev. Alfred Prideaux	Wildman, Miss Elizabeth Annie
Taylor, Mrs. Florence Prideaux	Wilson, Mrs. E. R. B.
Taylor, John Norman	Wiseman, Honorary Captain Charles Sher
Tha, Maung Po	Woerner, Miss Lydia
Tha, Maung Shwe	Wood, The Rev. A.
Thein, Maung Po	Wyness, Mrs. Ada
Theobald, Miss	Yaw, Maung
Thomas, Mrs. Mabel Fox	Yerbury, Miss J.
Thomas, Samuel Gilbert	Young, Dr. M. Y.
Thompson, R. C.	Zahur-ul-Husain, Muhammad

Indian Names and Titles.

There is a bewildering multiplicity of Indian titles, made all the more difficult inasmuch as here is a difference of nomenclature between the titles of Hindus and Mahomedans. Some titles are hereditary and represent ruling chiefs or those nominally such (and of these there are no less than some 620, whilst of the titles themselves some 200 are known); others are personal honours conferred on individuals by the Indian Government, and even then sometimes made hereditary. Yet again, there are numerous complimentary titles, or specifications of office, expressed in Hindu phrases, of which we have occasionally supplied the interpretations. It must be added that though *caste* is often figuring in the names it has nothing whatever to do with the titles. Amir, Khan, Mir, Sultan, Sri, &c., are confusingly used as both titles and names.

The order of rank is thus given by Sir R. Keithbridge in "The Golden Book of India."

Hindu—Maharaja Bahadur, Maharaja, Raja Bahadur, Raja, Rai Bahadur, Rai Saheb, Rai.

Mohammedan—Nizam, Nawab Bahadur, Nawab, Khan Bahadur, Khan Saheb, Khan.

Parsi and Bene-Israelites—Khan Bahadur, Khan Saheb.

Asfur—a corruption of the English "officer."

Ahluwalia—name of a princely family resident at the village of Ahlu, near Lahore.

Akhundzada—son of a Head Officer.

Alifah (Sindhi)—of exalted rank.

Ali Raja—Sea King (Laccadives).

Amir (corruptly *Emir*)—a Mohammedan Chief often also a personal name.

Asaf—a Minister.

Baba—lit. "father;" a respectful "Mr." Irish "Your Honour."

Babu—strictly a 5th or still younger son of a Raja, but often used of any son younger than the heir, whilst it has also grown into a term of address—Esquire. There are, however, one or two Rajas whose sons are known respectively as—1st, Kunwar; 2nd, Diwan; 3rd, Thakur; 4th, Lal; 5th, Babu.

Bahadur—lit. "brave" or "warrior;" a title used by both Hindus and Mohammedans, often bestowed by Government; added to other titles it increases their honour, but alone it designates an inferior ruler.

Bakhshi—a revenue officer or magistrate.

Begum or Begam—the feminine of "Nawab" combined in Bhopal as "Nawab Begum."

Besar—apparently a large land-owner.

Bhonsle—name of a Maratha dynasty.

Bhup—title of the ruler of Cooh Behar.

Bhugti—name of a Baluch tribe.

Chhatrapati—one of sufficient dignity to have an umbrella carried over him.

Dada—lit. "grandfather" (paternal); any venerable person.

Dawla and Dawlat—State, also one in office.

Deb—a Brahminical priestly title; taken from the name of a divinity.

Dhiraj—"Lord of the Lands;" added to "Raja," &c., it means "paramount."

Diwan—a Vizier or other First Minister to a native Chief, either Hindu or Mohammedan, and equal in rank with "Sardar," under which see other equivalents. The term is also used of a Council of State.

Elaya Raja—title given to the heir of the Maharaja of Travancore.

Farzand (with defining words added)—"favorite" or "beloved."

Fateh—"victory."

Fath Jeang—"Victorious in Battle" (a title of the Nizam).

Gaekwar (sometimes *Guicowar*)—title with "Maharaja" added of the ruler of Baroda. It was once a caste name and means "cowherd, i.e., the protector of the sacred animal; but later on, in common with "Holkar" and "Sindhia," it came to be a dynastic appellation and consequently regarded as a title. Thus, a Prince becomes "Gaekwar" on succeeding to the estate of Baroda; "Holkar," to that of Indore; and "Sindhia," to that of Gwalior.

Hafiz—guardian.

Haji—one who has made pilgrimage to Mecca.

Hiera Lal—"diamond ruby."

Holkar—see "Gaekwar."

Jah—a term denoting dignity.

Jam (Sindhi or Baluch)—Chief.

Kazi—(better written *Qazi*)—a Mohammedan magistrate.

Khan—originally the ruler of a small Mohammedan State, now a nearly empty title though prized. It is very frequently used as a name, especially by Afghans and Pathans.

Khwaja—a Persian word for "master," sometimes a name.

Kunwar or Kumar—the heir of a Raja.

Lal—a younger son of a Raja (strictly a 4th son, but see under "Babu").

Lokendra or Lokindra—"Protector of the World," title of the Chiefs of Dholpur and Dattia.

Mahant—a feudal title borne by the heads of a Hindu religious body.

Maharaja—the highest of hereditary rulers among the Hindus, or else a personal distinction conferred by Government. It has several variations as under "Raja," with the addition of *Maharaj Rana*; its feminine is *Maharani* (*maha*=great).

Malik—master, proprietor.

Mian—title of the son of a Rajput Nawab resembling the Scottish "Master."

Mir—a leader, an inferior title which, like "Khan," has grown into a name. It is especially used by descendants of the Chiefs of Sind.

Mirza—if prefixed, "Mr." or "Esquire."

Mong, Moung, or Maung (Arakanese)—leader.
Moulvi or Maulvi—a learned man or teacher.
Mudaliyar or Mud-liar—a personal proper name, but implying "steward of the lands."
Mumtaz-ud-Daula—distinguished in the State
Mulk, in the country).

Munshi—president, or presiding official.
Myowun—"Mr."

Nawab—originally a Viceroy under the Moghal Government, now the regular leading title of a Mohammedan Prince, corresponding to "Maharaja" of the Hindus.

Nazim—a ruler (not to be confused with following).

Nizam—the title of the ruler of Hyderabad, the one Mohammedan Prince superior to Nawab.

Nono (Thibetan)—the ruler of Spitta.

Pandi or Pundi—a learned man.

Peshkup—manager or agent.

Prince—term used in English courtesy for "Shahzada," but specially conferred in the case of "Prince of Arcot" (called also "Armini-Arcot").

Raja—a Hindu Prince of exalted rank, but inferior to "Maharaja." The feminine is *Rani* (Princess or Queen), and it has the variations *Raj, Rana, Rao, Rai, Rawal, Rawat, Raikwar, Raikbar, and Raikat*. The form *Rai* is common in Bengal, *Rao* in S. & W. India.

Raj Rajeshwar—King of Kings.

Risaldar—commander of a troop of horses.

Saheb—the Native Hindu term used to or of a European ("Mr. Smith" would be mentioned as "Smith Saheb," and his wife "Smith Mem-Saheb," but in *addressing* it would be "Saheb," fem. "Saheba," without the name); occasionally appended to a title in the same way as "Bahadur," but inferior (=master). The unusual combination "Nawab Saheb" implies a mixed population of Hindus and Mohammedans.

Sahibzada—son of a person of consequence.

Said, Sayid, Saiyid, Sidi, Syed, Syud—various forms for a title adopted by those who claim direct male descent from Mohammed's grandson Husain.

Sardar (corrupted to *Sirdar*)—a leading Government official, either civil or military, even a Grand Vizier. Nearly all the Punjab Barons bear this title. It and "Diwan" are like in value and used by both Hindus and Mohammedans. So, but Mohammedans only, are "Wali," "Sultan," "Amir," "Mir," "Mirza," "Mian," and "Khan."

Sawai—a Hindu title implying a slight distinction (lit. one-fourth better than others).

Saubwa (Burmese)—a Chief.

Shahzada—son of a King.

Shaikh or Sheikh (Arabic)—a Chief.

Shams-ud-Ulama—a Mohammedan title denoting "learned."

Shamshir-Jang—"Sword of Battle" (a title of the Maharaja of Travancore).

Sidi—a variation of "Said."

Sindhia—see under "Gaekwar."

Sri or Shri—lit. fortune, beauty: a Sanscrit term used by Hindus in speaking of a person much respected (never addressed to him; nearly—"Esquire"); used also of divinities. The two forms of spelling are occasioned by the intermediate sound of the *s* (that of *s* in the German *Stadt*).

Subadar—Governor of a province.

Sultan—like "Sardar."

Syed, Syud—more variations of "Said."

Talukdar—an Oudh landlord.

Talpur—the name of a dynasty in Sind.

Thakur—a Hindu term equivalent to "Bahadur," whether as affix or alone.

Tumandar—a Persian word denoting some office.

Umara—term implying the Nobles collectively.

Wali—like "Sardar." The Governor of Khe-lat is so termed, whilst the Chiefs of Cabul are both "Wali" and "Mir."

Zemindar or Zamindar—a landowner; orig. a Mohammedan collector of revenue.

Distinctive Badges.—An announcement was made at the Coronation Durbar in 1911, that a distinctive badge should be granted to present holders and future recipients of the titles of 'Diwan Bahadur', 'Sardar Bahadur', 'Khan Bahadur', 'Rai Bahadur', 'Rao Bahadur', 'Khan Sahib', 'Rai Sahib' and 'Rao Sahib'. Subsequently the following regulations in respect of these decorations were issued:—(1) The decoration to be worn by the holders of the titles above mentioned shall be a badge or medallion bearing the King's effigy crowned and the name of the title, both to be executed on a plaque or shield surrounded by a five-pointed star surmounted by the Imperial Crown, the plaque or shield being of silver gilt for the titles of Diwan, Sardar, Khan, Rai and Rao Bahadur, and of silver for the titles of Khan, Rai, and Rao Sahib. (2) The badge shall be worn suspended round the neck by a ribbon of one inch and a half in width, which for the titles of Diwan and Sardar Bahadur shall be light blue with a dark blue border, for the titles of Khan, Rai and Rao Bahadur light red with a dark red border, and for the titles of Khan, Rai and Rao Sahib dark blue with light blue border.

A Press Note issued in November, 1914, states:—The Government of India have recently had under consideration the question of the position in which **miniatures** of Indian titles should be worn, and have decided that they should be worn on the left breast fastened by a brooch, and not suspended round the neck by a ribbon as prescribed in the case of the Badge itself. When the miniatures are worn in conjunction with other decorations, they should be placed immediately after the Kaiser-i-Hind Medal.

Indian Distinguished Service Medal.—This medal was instituted on June 28th, 1907, by an Army Order published in Simla as a reward for both commissioned and non-commissioned officers of the regular and other forces in India. It bears on the obverse the bust of King Edward VII, and on the reverse a laurel wreath encircling the words For Distinguished Service. The

medal, $1\frac{3}{8}$ inches in diameter, is ordered to be worn immediately to the right of all war medals suspended by a red ribbon $1\frac{1}{2}$ in. wide, with blue edges $\frac{3}{8}$ in. wide. This medal may be conferred by the Viceroy of India.

Indian Order of Merit.—This reward of valour was instituted by the H. E. I. Co. in 1837, to reward personal bravery without any reference to length of service or good conduct. It is divided into three classes and is awarded to native officers and men for distinguished conduct in the field. On the advancement from one class to another the star is surrendered to the Government, and the superior class substituted, but in the event of the death of the recipient his relatives retain the decoration. The order carries with it an increase of one-third in the pay of the recipient, and in the event of his death the allowance is continued to his widow for three years. The First Class consists of a star of eight points, $1\frac{3}{8}$ in. in diameter, having in the centre a group of dark blue enamel bearing crossed swords in gold, within a gold circle, and the inscription Reward of Valour, the whole being surmounted by two wreaths of laurel in gold. The Second Class star is of silver, with the wreaths of laurel in gold; and the Third Class entirely of silver. The decoration is suspended from a simple loop and bar from a dark-blue ribbon $1\frac{1}{2}$ in. in width with red edges, bearing a gold or silver buckle according to class.

Order of British India.—This order was instituted at the same time as the Order of Merit, to reward native commissioned officers for long and faithful service in the Indian Army. Since 1878, however, any person European or native, holding a commission in a native regiment, became eligible for admission to the Order without reference to creed or colour.

The First Class consists of a gold eight-pointed radiated star $1\frac{1}{2}$ in. in diameter. The centre is occupied by a lion statant gardant upon a ground of light-blue enamel, within a dark-blue band inscribed Order of British India, and encircled by two laurel wreaths of gold. A gold loop and ring are attached to the crown for suspension from a broad ornamental band $\frac{5}{8}$ in. in diameter, through which the ribbon, once blue, now red, is passed for suspension from the neck. The Second Class is $1\frac{1}{8}$ in. in diameter with dark-blue enamelled centre: there is no crown on this class, and the suspender is formed of an ornamental gold loop. The reverse is plain in both classes. The First Class carries with it the title Sirdar Bahadur, and an additional allowance of two rupees a day: and the Second the title of Bahadur, and an extra allowance of one rupee per day.

Indian Meritorious Service Medal.—This was instituted on July 27th, 1888, and on receipt of the medal the order states "a non-commissioned officer must surrender his Long Service and Good Conduct medal": but on being promoted to a commission he may retain the M. S. medal, but the annuity attached to it will cease. On the obverse is the diademed bust of Queen Victoria facing left, with a veil falling over the crown behind, encircled by the legend Victoria Kaiser-i-Hind. On the reverse is a wreath of lotus leaves enclosing a wreath of palm tied at the base, having a star beneath; between the two wreaths is the inscription for meritorious service. Within the palm wreath is the word India. The medal, $1\frac{1}{2}$ in. in diameter, is suspended from a scroll by means of a red ribbon $1\frac{1}{2}$ in. wide. The medals issued during the reigns of Queen Victoria's successors bear on the obverse their bust in profile with the legend altered to EDWARDVS or GEORGIVS.

Laws and the Administration of Justice.

The indigenous law of India is personal and divisible with reference to the two great classes of the population, Hindu and Mahomedan. Both systems claim divine origin and are inextricably interwoven with religion, and each exists in combination with a law based on custom. At first the tendency of the English was to make their law public and territorial, and on the establishment of the Supreme Court at Calcutta in 1773 and the advent of English lawyers as judges, they proceeded to apply it to Europeans and Indians alike. This error was rectified by the Declaratory Act of 1780, by which Parliament declared that as against a Hindu the Hindu law and usage, and as against a Mahomedan the laws and customs of Islam should be applied. The rules of the Shastras and the Koran have been in some cases altered and relaxed. Instances can be found in the Bengal Sati Regulation Act of 1829; the Indian Slavery Act, 1843; the Caste Disabilities Removal Act of 1850; the Hindu Widows' Remarriage Act, 1856; and other Acts and Codes. To quote the Imperial Gazetteer, "A certain number of the older English statutes and the English common law are to a limited extent still in force in the Presidency Towns as applicable to Europeans, while much of the old Hindu and Mahomedan law is everywhere personal to their native fellow subjects; but apart from these, and from the customary law, which is as far as possible recognised by the Courts, the law of British India is the creation of statutory enactments made for it either at Westminster or by the authorities in India to whom the necessary law-giving functions have from time to time been delegated."

Codification.

Before the transfer of India to the Crown the law was in a state of great confusion. Sir Henry Cunningham described it as "hopelessly unwieldy, entangled and confusing." The first steps toward general codification were taken in 1833, when a Commission was appointed, of which Lord Macaulay was the moving spirit, to prepare a penal code. Twenty-two years elapsed before it became law, during which period it underwent revision from his successors in the Law Membership, and especially by Sir Barnes Peacock, the last Chief Justice of the Supreme Court of Calcutta. The Penal Code, which became law in 1860, was followed in 1861 by a Code of Criminal Procedure. Substantially the whole criminal law of British India is contained in these two Codes. One of the most eminent lawyers who ever came to India, Sir James Stephen, said "The Indian penal code may be described as the criminal law of England freed from all technicalities and superfluities, systematically arranged and modified in some few particulars (they are surprisingly few) to suit the circumstances of British India. It is practically impossible to misunderstand the code." The rules of Civil Procedure have been embodied in the Code of Civil Procedure. The Indian Penal Code has from time to time been amended. The Code of Civil Procedure was remodelled in 1908 and the Code of Criminal Procedure in 1898. These Codes are now in force.

European British Subjects.

Whilst the substantive criminal law is the same for all classes, certain distinctions of procedure have always been maintained in regard to criminal charges against European British subjects. Until 1872 European British subjects could only be tried or punished by one of the High Courts. It was then enacted that European British subjects should be liable to be tried for any offences by magistrates of the highest class, who were also justices of the peace, and by judges of the Sessions Courts; but it was necessary in both cases that the magistrate or judge should himself be a European British subject. In 1883 the Government of India announced that they had decided "to settle the question of jurisdiction over European subjects in such a way as to remove from the code at once and completely every judicial disqualification which is based merely on race distinctions." This decision, embodied in the Ilbert Bill, aroused a storm of indignation which is still remembered. The controversy ended in a compromise which is thus summarised by Sir John Strachey ("India"). "The controversy ended with the virtual, though not avowed, abandonment of the measure proposed by the Government. Act III of 1884, by which the law previously in force was amended, cannot be said to have diminished the privileges of European British subjects charged with offences, and it left their position as exceptional as before. The general disqualification of native judges and magistrates remains; but if a native of India be appointed to the post of district magistrate or sessions judge, his powers in regard to jurisdiction over European British subjects are the same as those of an Englishman holding the same office. This provision however is subject to the condition that every European British subject brought for trial before the district magistrate or sessions judge has the right, however trivial be the charge, to claim to be tried by a jury of which not less than half the number shall be Europeans or Americans.....Whilst this change was made in the powers of district magistrates, the law in regard to other magistrates remained unaltered." Since 1836 no distinctions of race have been recognised in the civil courts throughout India.

High Courts.

The highest legal tribunals in India are the High Courts of Judicature. These were constituted by the Indian High Courts Act of 1861 for Bengal, Bombay and Madras, and later for the United Provinces and the Punjab superseding the old supreme and Sudder Courts. The Judges are appointed by the Crown; they hold office during the pleasure of the Sovereign; at least one-third of their number are barristers, one-third are recruited from the judicial branch of the Indian Civil Service, the remaining places being available for the appointment of Indian lawyers. Trial by jury is the rule in original criminal cases before the High Courts, but juries are never employed in civil suits in India.

For other parts of India High Courts have been formed under other names, the chief

difference being that they derive their authority from the Government of India, not from Parliament. In Burma there is a Chief Court, with three or more judges; in the other provinces the chief appellate authority is an officer called the Judicial Commissioner. In Sind the Judicial Commissioner is termed Judge of the Sudder Court and has two colleagues.

The High Courts are the Courts of appeal from the superior courts in the districts, criminal and civil, and their decisions are final, except in cases in which an appeal lies to His Majesty in Council and is heard by the Judicial Committee of the Privy Council in England. The High Courts exercise supervision over all the subordinate courts. Returns are regularly sent to them at short intervals and the High Courts are able, by examining the returns, by ending for proceedings, and by calling for explanations, as well as from the cases that come before them in appeal, to keep themselves to some extent acquainted with the manner in which the courts generally are discharging their duties.

Lower Courts.

The Code of Criminal Procedure provides for the constitution of inferior criminal courts styled courts of session and courts of magistrates. Every province, outside the Presidency towns, is divided into sessions divisions, consisting of one or more districts, and every sessions division has a court of session and a sessions judge, with assistance if need be. These stationary sessions courts take the place of the English Assizes, and are competent to try all accused persons duly committed, and to inflict any punishment authorised by law, but sentences of death are subject to confirmation by the highest court of criminal appeal in the province. Magistrates' courts are of three classes with descending powers. Provision is made and largely utilised in the towns, for the appointment of honorary magistrates; in the Presidency towns Presidency magistrates deal with magisterial cases and benches of Justices of the Peace or honorary magistrates dispose of the less important cases.

Trials before courts of session are either with assessors or juries. Assessors assist, but do not bind the judge by their opinions; on juries the opinion of the majority prevails if accepted by the presiding Judge. The Indian law allows considerable latitude of appeal. The prerogative of mercy is exercised by the Governor-General-in-Council and the Local Government concerned without prejudice to the superior power of the Crown.

The constitution and jurisdiction of the inferior civil courts varies. Broadly speaking, one district and sessions judge is appointed for each district: as District Judge he presides in its principal civil court of original jurisdiction; his functions as Sessions Judge have been described. For these posts members of the Indian Civil Service are mainly selected though some appointments are made from the Provincial Service. Next come the Subordinate Judges and Munsiffs, the extent of whose original jurisdiction varies in different parts of India. The civil courts, below the grade of District

Judge; are almost invariably presided over by Indians. There are in addition a number of Courts of Small Causes, with jurisdiction to try money suits up to Rs. 500. In the Presidency Towns, where the Chartered High Courts have original jurisdiction, Small Cause Courts dispose of money suits up to Rs. 2,000. As Insolvency Courts the chartered High Courts of Calcutta, Bombay and Madras have jurisdiction in the Presidency towns. In the mofussil similar powers were conferred on the District Courts by the Insolvency Act of 1906.

Coroners are appointed only for the Presidency Towns of Calcutta and Bombay. Elsewhere their duties are discharged by the ordinary staff of magistrates and police officers unaided by jurors.

Legal Practitioners.

Legal practitioners in India are divided into Barristers-at-Law, Advocates of the High Court, Vakils and Attorneys (Solicitors) of High Courts, and Pleaders, Mukhtars and revenue agents. Barristers and Advocates are admitted by each High Court to practise in it and its subordinate courts; and they alone are admitted to practise on the original side of some of the chartered High Courts. Vakils are persons duly qualified who are admitted to practise on the appellate side of the chartered High Courts and in the Courts subordinate to the High Courts. Attorneys are required to qualify before admission to practise in much the same way as in England. The rule that a solicitor must instruct counsel prevails only on the original side of certain of the High Courts. Pleaders practise in the subordinate courts in accordance with rules framed by the High Courts.

Organisation of the Bar.

At Calcutta, Madras, and Bombay there is a Bar Committee presided over, *ex officio*, by the Advocate-General. This body is elected by the barristers practising in each High Court, and its functions are to watch the interests of the Bar and to regulate its etiquette. At Allahabad, Lahore, Nagpore, and Rangoon a similar Bar Committee exists, but the electorate is extended to include the vakils or native pleaders, and the president is either the senior practising member of the Bar or the Government Advocate. In the larger Districts and Sessions Courts, an organisation representing the Bar is usually to be found, and in the subordinate Courts, including the Revenue Courts, similar machinery is generally in use. Pending an opportunity of detailed inquiries in India these general descriptions must suffice.

Composition of the Bar.

A considerable change is occurring in the composition of the Indian Bar. The following extract from an informing article in the *Times* (May 25, 1914) indicates the character and incidence of this development "During the last forty years, a striking change has taken place in the professional class. The bulk of practice has largely passed from British to Indian hands, while, at the same time, the profession has grown to an enormous extent. One typical illustration may be quoted. Attached to the Bombay High Court in 1871 there

were 38 solicitors, of whom 10 were Indian and 28 English, and 24 advocates, of whom 7 were Indian and 17 English. In 1911, attached to the same High Court, there were 150 solicitors, of whom more than 130 were Indian and the remainder English, and 250 advocates, of whom 16 only were English and the remainder Indian."

Law Officers.

The Government of India has its own law colleague in the Legal Member of Council. All Government measures are drafted in this department. Outside the Council the principal law officer of the Government of India is the Advocate-General of Bengal, who is appointed by the Crown, is the leader of the local Bar, and is always nominated a member of the Provincial Legislative Council. In Calcutta he is assisted by the Standing Counsel and the Government Solicitor. There are Advocates-General and Government Solicitors for Bombay and Madras, and in Bombay there is attached to the Secretariat a Legal Remembrancer and an Assistant Legal Remembrancer, drawn from the Judicial Branch of the Indian Civil Service. The Government of Bengal consults the Bengal Advocate-General, the Standing Counsel and the Government Solicitor, and has besides a Legal Remembrancer (a Civil Servant) and a Deputy Legal Remembrancer (a practising barrister); the United Provinces are equipped with a civilian Legal Remembrancer and professional lawyers as Government Advocate and Assistant Government Advocate; the Punjab has a Legal Remembrancer, Government Advocate and a Junior Government Advocate; and Burma a Government Advocate, besides a Secretary to the Local Legislative Council.

Sheriffs are attached to the High Courts of Calcutta, Madras and Bombay. They are appointed by Government, selected from non-officials of standing, the detailed work being done by deputy sheriffs, who are officers of the Court.

Law Reports.

The Indian Law Reports are published in four series—Calcutta, Madras, Bombay, and Allahabad, under the authority of the Governor-General in Council. They contain cases determined by the High Court and by the Judicial Committee on appeal from the particular High Court. These appeals raise questions of very great importance, and the Council of Law Reporting for England and Wales show their appreciation by printing the Indian Appeals in a separate volume, and have also compiled a digest of Indian Appeals covering the period 1874-1893. The other Provinces and States have series of reports issued under the authority either of the Judiciary or the State.

Legislative Power.

The supreme power of Parliament to legislate for the whole of India cannot be questioned. In practice, however, this power is little used, there being a majority of officials on the Imperial Legislative Council—a majority deliberately reserved in the India Councils Act of 1909—the Secretary of State is able to impose his will on the Government of India and to secure the passage of any measure he may frame, regardless of the opinion of the Indian authorities. Legislative Councils have been established both for the whole of India and for the principal provinces. Their constitution and functions are fully described in detailing the powers of the Imperial and Provincial Councils (q. v.). To meet emergencies the Governor-General is vested with the power of issuing ordinances, having the same force as Acts of the Legislature, but they can remain in force for only six months. The power is very little used. The Governor-General-in-Council is also empowered to make regulations, having all the cogency of Acts, for the more backward parts of the country, the object being to bar the operation of the general law and permit the application of certain enactments only.

Bengal Judicial Department.

Sanderson, Sir Lancelot	Chief Justice.
Teunon, The Hon'ble Mr. William, I.C.S.	Puisne Judge.
Woodroffe, The Hon'ble Sir John George, M.A., Bar-at-Law.	Ditto.
Mukharji, The Hon'ble Sir Ashutosh, Kt., C.S.I., M.A., D.L.	Ditto.
Richardson, The Hon'ble Mr. Thomas Willata, I.C.S., Bar-at-Law.	Ditto.
Walmsley, The Hon'ble Mr. Hugh, I.C.S.	Ditto.
Rankin, The Hon. Mr. George Claus, Bar-at-Law. ..	Ditto.
Fletcher, The Hon'ble Mr. Ernest Edward, Bar-at-Law	Ditto.
Greaves, The Hon'ble Mr. William, Ewart	Ditto.
Syed Shamsul-Huda, Hon'ble Nawab Sir, K.C.I.E. ..	Ditto.
Chatarji, The Hon'ble Mr. Nalini Ranjan, M.A., B.L. ..	Ditto.
Chaudhuri, The Hon. Sir Asutosh, Bar-at-Law ..	Ditto.
Newbould, The Hon'ble Mr. B. B.	Ditto.
Beachcroft, The Hon'ble Mr. Charles Porten, I.C.S. ..	Ditto.
Ghosh, The Hon. Mr. Charn Chander, Bar-at-Law ..	Ditto

Bengal Judicial Department—contd.

Gibbons, The Hon'ble Mr. Thomas Clarke Pilling, K.C.	Advocate-General.
Satish Ranjan Das, Bar-at-Law.	Standing Counsel.
Kesteven, The Hon'ble Mr. Charles Henry	Government Solicitor.
Duval, The Hon. Mr. H. P., I.C.S.	Superintendent and Remembrancer of Legal Affairs.
Orr, John Williams, Bar-at-Law.. ..	Deputy Superintendent and Remembrancer of Legal Affairs.
Ram Charan Mitra	Senior Government Pleader.
Hume, J. T.	Public Prosecutor, Calcutta.
Hechle James, Herbert	Registrar, Keeper of Records, Taxing Officer, Accountant-General, and Sealer, etc., Original Jurisdiction.
Remfry, Maurice	Registrar in Insolvency, Original Side.
Nalini Mohan Chatarji, Bar-at-Law	Master and Official Referee.
Ryder, George	Dy. Registrar.
Bonnaud, William Augustus, Bar-at-Law	Clerk of the Crown for Criminal Sessions.
Kirkham, Joseph Alfred	Secretary to the Chief Justice and Head Clerk, Decree Department.
Edgley, Norman George Armstrong, I.C.S.	Registrar and Taxing Officer, Appellate Jurisdiction.
Counsell, Frank Bertram	Deputy Registrar. (On leave).
Paulit, Peter Sydenham	Assistant Registrar.
Grey, Charles Edward, Bar-at-Law	Administrator-General and Official Trustee.
Bonnerjee, K. K. Shelly, Bar-at-Law	Official Receiver, sub. <i>pro tem</i> .
Dobbin, F. K., Bar-at-Law	Coroner of Calcutta.
Falkner, George McDonald	Official Assignee.
Bose, B.D., Bar-at-Law	Editor of Law Reports.

Bombay Judicial Department.

Macleod, The Hon. Sir Norman Cranstoun, Bar-at-Law.	Chief Justice.
Shah, The Hon'ble Mr. Lalubhai Asharam, M.A., LL.B.	Puisne Judge.
Marten, The Hon. Mr. A. B.	Ditto.
Pratt, The Hon. Mr. Edward Millard, I.C.S.	Ditto.
Heaton, The Hon'ble Sir Joseph John, I.C.S.	Ditto.
Hayward, The Hon'ble Mr. Maurice Henry Weston, LL.B.	Ditto.
Abdeali Muhammadali Kaziji, The Hon. Mr.	Ditto.
Strangman, the Hon'ble Mr. T. J.	Advocate-General.
French, George Douglas	Remembrancer of Legal Affairs.
Milne, Robert Blair, M.A., I.C.S.	Assistant Remembrancer of Legal Affairs.
Bowen, J. C. G.	Government Solicitor and Public Prosecutor.
Campbell, Henry.	Clerk of the Crown.
Weldon, Walton Langford, Bar-at-Law.	Reporter to the High Court.
Mitchell, H. C. B.	Administrator-General and Official Trustee.
Phirozshah Behramji Malbari, Bar-at-Law	Prothonotary, Testamentary and Admiralty Registrar.
Hirjibhai Hormasji Wadia, M.A.	Master and Registrar in Equity and Commissioner for taking Accounts and Local Investigations, and Taxing Officer.
Purshottamdas Thakordas, the Hon. Mr.	Sheriff.
Allison, Frederick William, B.A., I.C.S.	Registrar, Appellate Side.
Nasarwanji Dinshahji Gharda, B.A., LL.B.	Deputy Registrar and Sealer, Appellate Side.
King, A. R.	Acting Coroner.

Bombay Judicial Department—contd.**COURT OF THE JUDICIAL COMMISSIONER OF SIND.**

Fawcett, Charles Gordon Hill, I.C.S.	Judicial Commissioner. (On combined leave.)
Kincaid, The Hon. Mr. Charles Augustus, C.V.O., I.C.S.	Acting Judicial Commissioner.
Crouch, Henry Newton, LL.B., Bar.-at-Law	Additional Judicial Commissioner. (On furlough).
Crump, The Hon. Mr. Louis Charles, I.C.S.	Additional Judicial Commissioner.
DeSouza, Dr. Francis Xavier, Bar.-at-Law, I.C.S.	Ditto.
Kemp, Norman Wright	Ditto.
Raymond, Edward	Ditto. (Temporary).

Madras Judicial Department.

Wallis, The Hon'ble Sir John Edward Power, Kt., M.A., Bar.-at-Law.	Chief Justice (On furlough.)
Abdur Rahim, The Hon'ble Mr., M.A., Bar.-at-Law ..	Officiating Chief Justice.
Oldfield, The Hon'ble Mr. Francis Du Pre, I.C.S. ..	Puisne Judge.
Spencer, The Hon'ble Mr. Charles Gordon, I.C.S. ..	Ditto.
Trotter, The Hon'ble Mr. Victor Murray Coultis ..	Ditto.
Seshagiri Ayyar, The Hon. Mr. T. V., B.A., B.L. ..	Ditto.
Sadasiva Ayyar, The Hon'ble Diwan Bahadur T. ..	Ditto.
Ayling, The Hon'ble Sir William Bock, I.C.S.	Ditto.
Bakewell, The Hon'ble Mr. James Herbert, LL.B., Bar.-at-Law.	Ditto.
Phillips, The Hon. Mr. William Watkin, I.C.S. ..	Ditto. (On furlough.)
Kumarswami Shastri, The Hon'ble Diwan Bahadur C. V. Napier, The Hon. Mr. Charles Frederick	Officiating Judge. (Additional).
Krishnan, The Hon. C. Dewan Bahadur, M.A. Bar.-at-Law	Ditto. (do.)
Moore, The Hon. Mr. L. G., I.C.S.	Officiating Judge (Additional).
Burn, The Hon. Mr. J. G., I.C.S., Bar.-at-Law	Ditto.
Srinivasa Ayyangar, The Hon. Mr. S., B.A., B.L. ..	Ditto.
Brightwell, Henry	Advocate-General.
Ramesam Pantulu	Government Solicitor.
Osborne, E. R.	Acting Government Pleader.
Grant, P. R., Bar.-at-Law	Public Prosecutor.
Odgers, The Hon'ble Mr. C. E., M.A., Bar.-at-Law ..	Senior Law Reporter.
Mackay, Charles Gordon, I.C.S.	Administrator-General and Official Trustee.
Sydney-Smith, Carleton, Bar.-at-Law	Registrar.
	Crown Prosecutor.

Assam Judicial Department.

Abdul Majid, The Hon. Mr., B.A., LL.B., Bar.-at-Law ..	Judge and Superintendent and Remembrancer of Legal Affairs, Shillong.
Mellor, The Hon. Mr. Arthur	Judge, Assam Valley Districts, Gauhati.
Liddell, Henry Crawford	District and Sessions Judge, Sylhet and Cachar (On leave.)
Rajendra Nath Ray	Additional do. do.

Bihar and Orissa Judicial Department.

Miller, The Hon. Sir Thomas Frederick Dawson	Chief Justice.
Roe, The Hon. Mr. Francis Reginald, I.C.S.	Puisne Judge (On combined leave.)
Atkinson, The Hon'ble Mr. Cecil, K.C.	Ditto.
Jwala Prashad, The Hon'ble Mr.	Ditto.
Coutts, The Hon. Mr. William Strachan	Ditto.
Prafullo Ranjan Dass, The Hon. Mr., Bar.-at-Law	Ditto.
Mullick, The Hon'ble Mr. Basanta Kumar, I.C.S. ..	Ditto (On leave.)
Sultan Ahmad, Bar.-at-Law	Government Advocate.
MacPherson The Hon. Mr. T. S., I.C.S.	Superintendent and Remembrancer of Legal Affairs.
Allanson, Harry Llewelyn Lyons, I.C.S.	Registrar.

Burma Judicial Department.

Twomey, The Hon'ble Sir Daniel Harold Ryan, I.C.S., Bar.-at-Law.	Chief Judge, Chief Court, Lower Burma.
Ormond, The Hon'ble Mr. Ernest William, B.A., Bar.-at-Law.	Judge.
Robinson, The Hon'ble Mr. Sydney Maddock, Bar.-at-Law.	Do.
Maung Kin	Do.
Rigg, The Hon. Mr. Arthur Edmund, B.A., I.C.S. ..	Do.
Rutledge, The Hon. Mr. John Guy, M.A.	Officiating Judge.

Burma Judicial Department—*contd.*

Saunders, Leslie Harry, I.C.S.	Judicial Commissioner, Upper Burma (On leave).
Pratt, Henry Sheldon, M.A., I.C.S.	Offg. Jud. Comm'sioner, Upper Burma.
deGlanville, Oscar, Bar.-at-Law	Administrator-General, Official Trustee, Official Assignee and Receiver, Rangoon. (Temporary).
Christopher, S. A., Bar.-at-Law	Government Prosecutor, Rangoon.
Darwood, Arthur John, Bar.-at-Law	Ditto. Moulmein.
Millar, Edward	Registrar, Court of Judicial Commissioner, Upper Burma.

Central Provinces Judicial Department.

Drake Brockman, Sir H. V., M.A., LL.M., Bar.-at-Law, I.C.S.	Judicial Commissioner.
Batten, J. K., I.C.S.	First Additional Judicial Commissioner.
Hallifax, H. F., I.C.S.	Second Additional Judicial Commissioner. (On Military duty.)
Prideaux, Frank Winckworth Austin, O.B.E.	Second Additional Judicial Commissioner (Provisional.)
Woodward, F. J., I.C.S.	Registrar.
Parande, K. G.	Deputy Registrar.

N.-W. Frontier Province Judicial Department.

Rennie, F. P., I.C.S.	Judicial Commissioner (Officiating).
Bhai Shah Singh	Registrar.

Punjab Judicial Department.

Vacant	Chief Judge.
Smith, The Hon'ble Mr. H. Scott, I.C.S.	Judge.
Chevis, The Hon'ble Mr. William, I.C.S.	Do.
Shadi Lal, The Hon'ble Rai Bahadur, Bar.-at-Law	Do.
Le Rossignol, The Hon. Mr. Walter Aubin, I.C.S.	Do.
Broadway, The Hon. Mr. Alan Brice, Bar.-at-Law	Do.
Leslie Jones, The Hon. Mr. Leycester Hudson, B.A., I.C.S.	Do. (On leave).
Abdur Rauf, The Hon. Khan Bahadur Sayed Muhammad, Bar.-at-Law.	Temporary Additional Judge.
Ellis, The Hon. Mr. Thomas Peter, M.A., I.C.S.	Legal Remembrancer.
Petman, Charles Bevan, B.A., Bar.-at-Law	Government Advocate.
Ferguson, John Alexander, M.A., I.C.S.	Registrar.
Herbert, H. A.	Assistant Legal Remembrancer and Administrator-General and Official Trustee.

United Provinces Judicial Department.

Knox, The Hon'ble Sir George Edward, Kt., LL.D., I.C.S.	Officiating Chief Justice.
Banarji, The Hon'ble Sir Pramada Charan, Kt., B.A., B.L.	Puisne Judge.
Piggott, The Hon'ble Mr. Theodore Caro, I.C.S.	Ditto.
Fudball, The Hon'ble Mr. William, I.C.S.	Ditto.
Walsh, The Hon. Mr. Cecil, Bar.-at-Law, M.A.	Ditto.
Rafiq, The Hon'ble Mr. Muhammad, Bar.-at-Law	Ditto.
Johnson, John Nesbitt Gordon, I.C.S.	Registrar.
Daniels, Sidney Reginald	Legal Remembrancer to Government.
King, The Hon. Mr. Carleton Moss	Officiating Legal Remembrancer.
Porter, Wilfred King, Bar.-at-Law	Law Reporter and Secretary, Legislative Council.
Bital Prasad Ghosh, Babu	Government Pleader.
dalcomson, R.	Government Advocate.

COURT OF JUDICIAL COMMISSIONER OF OUDH—LUCKNOW.

Andsay, Benjamin, I.C.S.	Judicial Commissioner. (On special duty).
Quart, Louis, I.C.S.	First Additional Judicial Commissioner.
Kanhaiya Lal, Rai Bahadur	Second Additional Judicial Commissioner.
Saiyid Iftikhar Husain, B.A.	Registrar.
Jagendra Nath Ghosal, Rai Bahadur, B.A., B.L.	Government Pleader.

NUMBER AND VALUE OF CIVIL SUITS INSTITUTED.

Administrations.	Number of Suits Instituted.						Number of Suits the value of which cannot be estimated in money.	Total Number of Suits Instituted.	Total Value of Suits.
	Value not exceeding Rs. 10.	Value Rs. 10 to Rs. 50.	Value Rs. 50 to Rs. 100.	Value Rs. 100 to Rs. 500.	Value Rs. 500 to Rs. 1,000.	Value Rs. 1,000 to Rs. 5,000.			
Bengal	107,822	323,549	150,304	153,795	13,270	7,304	1,243	763,233	7,132,233
Bihar and Orissa	35,895	77,412	30,457	34,786	4,353	3,490	841	187,414	3,481,801
United Provinces	18,931	86,648	56,533	58,302	7,001	6,189	1,413	230,010	4,797,119
Punjab	18,832	66,474	50,143	53,559	8,097	4,538	615	202,593	2,655,421
Delhi	534	2,081	1,249	1,613	463	379	105	6,425	129,365
North-West Frontier Province	3,095	9,611	6,928	6,250	758	597	77	27,321	302,534
Burma	3,122	19,519	13,603	19,468	2,356	1,728	386	61,491	1,552,448
Central Provinces and Berar	7,441	43,573	23,436	33,532	4,246	2,871	385	120,485	2,980,665
Assam	4,837	21,723	10,392	10,388	819	318	42	48,590	365,418
Ajmer-Merwara	1,212	4,115	2,086	1,591	44	37	11	9,096	80,143
Coorg	206	1,516	830	494	47	30	2	2,925	18,603
Madras	87,524	199,452	81,765	100,343	13,002	8,517	1,351	493,035	6,566,748
Bombay	11,188	56,851	33,483	42,124	6,565	4,833	1,051	158,430	5,106,803
British Baluchistan	586	1,784	601	686	119	49	6	3,995	32,154
TOTAL, 1917	296,225	919,308	466,612	517,131	61,140	40,880	7,528	2,315,373	35,201,455
TOTALS	1916	305,751	935,140	463,294	511,417	60,405	39,680	2,329,000	32,502,836
	1915	309,505	900,766	431,983	475,916	56,453	37,934	2,226,468	31,554,484
	1914	286,704	835,694	390,885	438,122	53,845	36,247	2,055,160	34,083,673
	1913	289,745	851,323	395,546	433,932	51,981	34,066	2,070,117	28,255,410
	1912	301,394	867,790	393,802	425,852	50,300	33,037	2,085,407	26,783,601
	1911	299,342	858,388	387,657	406,486	47,408	31,563	2,043,336	27,350,585
	1910	301,895	879,145	405,969	440,101	56,628	37,732	2,135,031	32,340,358
	1909	294,997	845,946	376,742	390,375	48,654	30,806	2,000,546	28,958,056
	1908	289,284	819,595	354,196	366,602	44,430	28,236	1,914,954	26,955,219
	1907	300,837	808,368	335,739	344,351	40,707	26,186	1,867,899	22,459,065
	1906	311,039	818,974	335,840	338,010	39,863	25,014	1,880,108	22,370,186

* Details not given of 42 Bombay suits in 1906; 56 Madras suits in 1906, 99 in 1907, 74 in 1908, 92 in 1909, 376 in 1910, 71 in 1911, 64 in 1912, 22 in 1913, and 28 suits in 1914; 370 Bengal suits in 1909; and 49 Delhi suits in 1913 and 84 in 1914.

THE INDIAN POLICE.

The Indian Government employ 203,471 Officers and men in the Indian Police. The total cost of maintaining the Force is Rs. 4,330,890 according to the latest figures available, but this total has been considerably raised in the past year or two on account of increases of pay and allowances made on account of the increased cost of living. In large cities, the Force is concentrated and under direct European control; in the mofussil the men are scattered throughout each District and located at various Outposts and Police Stations. The smallest unit for administrative purposes is the Outpost which generally con-

sists of 3 or 4 Constables under the control of a Head Constable. Outpost Police are maintained to patrol roads and villages and to report all matters of local interest to their superior, the Sub-Inspector. They have no powers to investigate offences and are a survival of the period when the country was in a disturbed state and small bodies of Police were required to keep open communications and afford protection against the raids of dacoits. It is an open question whether they are now of much use. Each Outpost is under a Police Station which is controlled by an officer known as a Sub-Inspector.

Distribution of Police.—The area of a Police Station varies according to local conditions. The latest figures available are:—

							Average area per Police Station.	Average number of Regular Civil Police per 10,000 of Population.
							Square miles.	
Bengal *	..	..	..	..	..	..	126	4·8
Assam	..	..	..	..	..	..	616	5·3
United Provinces	..	..	..	..	..	..	127	7·7
Punjab	..	..	..	..	..	..	203	10·3
North-West Frontier Province	..	..	..	..	..	..	179	19·8
Central Provinces and Berar	..	..	..	..	..	..	242	8·6
Burma *	..	..	..	..	..	..	487	13·4
Madras	..	..	..	..	..	..	144	8·0
Bombay *	..	..	..	..	..	..	252	15·0

* Excluding the towns of Calcutta, Bombay and Rangoon. The figures include the Railway police, but not Military police.

Organisation of Police.

The Police Station Officer (the Sub-Inspector) is responsible for the investigation of all cognisable crimes, that is to say, all offences in which the Police can arrest without a warrant from a Magistrate, which occur within his jurisdiction; he is also held responsible for the maintenance of the public peace and the prevention of crime. From the point of view of the Indian Ryot, he is the most important Police Officer in the District and may rightly be considered the backbone of the Force.

Superior to the Sub-Inspector is the Inspector who holds charge of a Circle containing 4 or 5 Police Stations. His duties are chiefly those of supervision and inspection. He does not ordinarily interfere in the investigation of crime unless the conduct of his subordinates renders this necessary.

The Inspector is usually a selected and experienced Sub-Inspector. Each District contains 3 or 4 Circles, and in the case of large

Districts, is divided into 2 Sub-divisions—one of which is given to an Assistant Superintendent of Police, a European gazetted Officer. The Police Force in each District is controlled by a District Superintendent of Police, who is responsible to the District Magistrate (Collector or Deputy Commissioner) for the detection and prevention of crime and for the maintenance of the public peace, and, to his Deputy Inspector-General and Inspector-General, for the internal administration of his Force. Eight or ten Districts form a Range administered by a Deputy Inspector-General, an officer selected from the ranks of the Superintendents. At the head of the Police of each Province is the Inspector-General who is responsible to the Local Government for the administration of the Provincial Police.

Separate but recruited from the District Force is the Criminal Investigation Department, which is under the control of a specially selected European Officer of the rank and

standing of a Deputy Inspector-General. The Criminal Investigation Department, usually called the C. I. D., is mainly concerned with political inquiries, sedition cases and crimes with ramifications over more than one District or which are considered too important to leave in the hands of the District Police. It is a small force of Sub-Inspectors and Inspectors who have shown their ability and intelligence when working in the mofussil and forms in each Province a local Scotland Yard.

The larger Cities of Calcutta, Bombay, and Madras have their own Police Force, independent of the Inspector-General of Police, and under the control of a Commissioner and 2 or more Deputies. For Police purposes each city is divided into divisions; in Calcutta each division is in charge of a Deputy Commissioner of Police; in Bombay and Madras of a Superintendent, these officers being selected from the European ranks of the City Force. In Bombay, however, the Superintendents are Gazetted Officers. Each division is sub-divided into a small number of Police Stations, the station being in charge of an Inspector assisted by Indian Sub-Inspectors and European Sergeants.

The Supreme Government at Delhi and Simla keeps in touch with the Provincial Police by means of the Director of Criminal Intelligence and his Staff. The latter do not interfere in the Local Administration and are mainly concerned with the publication of information regarding international criminals, inter-provincial crime and Political inquiries in which the Supreme Government is interested.

Recruitment.—The constable is enlisted locally. Certain castes are excluded from service and the formation of cliques by filling up the Force from any particular caste or locality is forbidden. In some Provinces a fixed percentage of foreigners must be enlisted. Recruits must produce certificates of good character and pass a medical test. They must be above certain standards of physical development. The constable rises by merit to the rank of Head Constable and, prior to the Police Commission, could rise to the highest Indian subordinate appointments. Since 1906, his chances of promotion have been greatly curtailed; this has certainly lowered the standard coming forward for service in the Force in the lower ranks.

The Sub-Inspector, until 1906, was a selected Head Constable, but Lord Curzon's Commission laid down that Sub-Inspectors should be recruited direct from a socially better class of Indians. In most Provinces, eighty per cent. of the Sub-Inspectors are selected by nomination, trained for a year or 18 months at a Central Police

School, and, after examination, appointed direct to Police Stations to learn their work by actual experience. It is too early to judge this system by results, but it has no doubt great disadvantages and undetected crime in India is increasing rapidly.

An Inspector is generally a selected Sub-Inspector. Direct nomination is the exception, not the rule.

The Deputy Superintendent, a new class of officer, instituted on the recommendation of the Commission, is an Indian gazetted officer and is the native Assistant to the District Superintendent of Police. He is either selected by special promotion from the ranks of the Inspectors or is nominated direct, after a course at the Central Police School.

Prior to 1893, the gazetted ranks of the Force were filled either by nomination or by regimental officers seconded from the Army for certain periods. In 1893, this system was abandoned and Assistant Superintendents were recruited by examination in London. On arrival in India, they were placed on probation until they had passed their examinations in the vernacular, in law, and in riding and drill. The establishment of Police Training Schools in 1906 has done much to improve the training of the Police Probationer, and selection by examination has given Government a better educated officer, but open competition does not reveal the best administrators and should be tempered, as in the Navy, by selection.

Internal Administration.—The District Force is divided into 2 Branches—Armed and Unarmed. As the duties of the armed branch consist of guarding Treasuries, escorting treasure and prisoners and operating against dangerous gangs of dacoits, they are maintained and controlled on a military basis. They are armed and drilled and taught to shoot after military methods. The unarmed branch are called upon to collect fines magisterially inflicted, serve summonses and warrants, control traffic, destroy stray dogs, extinguish fires, enquire into accidents and non-cognizable offences. The lower grades are clothed and housed by Government without expense to the individual. The leave rules are fairly liberal, but every officer, European or Native, must serve for 30 years before he is entitled to any pension, unless he can obtain a medical certificate invaliding him from the service. This period of service in an Eastern climate is generally admitted to be too long and the efficiency of the Force would be considerably improved if Government allowed both the officers and men to retire after a shorter period of service.

STATISTICS OF POLICE WORK.

The undesirability of attaching undue importance to statistical results as a test of the merits of police work was a point upon which considerable stress was laid by the Indian Police Commission, who referred to the evils likely to result from the prevalence among subordinate officers of an impression that the advancement of an officer would depend upon his being able to show a high

ratio of convictions, both to cases and to persons arrested, and a low ratio of crime. The objection applies more particularly to the use of statistics for small areas; but they cannot properly be used as a basis of comparison even for larger areas without taking into account the differences in the conditions under which the police work; and, it may be added, they can at the best indicate only very

imperfectly the degree of success with which the police carry out that important branch of their duties, which consists in the prevention of crime. These considerations have been emphasized in recent orders of the Government of India. Subject to these observations,

the figures below may be given as some indication of the volume of work falling upon the police, and of the wide differences between the conditions and the statistical results in different provinces:—

Administrations.	Number of Offences reported.	Number of Persons under Trial.	Persons whose cases were disposed of				Persons remaining under Trial at the end of the Year.	
			Dis-charged or Acquitted.	Con-victed.	Com-mitted or Referred.	Died, Escaped or Trans-ferred to another Province.		
Bengal	369,372	(b) 329,322	104,530	209,223	3,313	194	12,060	
Bihar and Orissa ..	112,176	112,342	56,199	49,506	1,401	114	5,122	
United Provinces ..	224,550	331,302	189,053	128,123	5,527	337	8,262	
Punjab	188,136	251,241	170,778	64,889	1,437	212	13,925	
North-West Frontier Province.	23,154	34,526	16,819	16,820	412	18	457	
Burma	118,494	186,338	61,935	112,759	1,787	1,565	8,292	
Central Provinces and Berar.	38,329	53,233	28,300	19,660	1,851	69	3,353	
Assam	46,089	36,666	(c) 18,841	14,721	667	37	2,396	
Ajmer-Merwara ..	5,855	8,082	3,124	4,258	10	92	591	
Coorg	4,201	4,917	2,385	1,829	3	15	685	
Madras	326,047	437,359	192,417	224,954	4,638	150	15,200	
Bombay	169,343	(a) 235,525	89,240	134,489	1,760	1,913	8,114	
British Baluchistan ..	7,396	11,752	6,864	3,792	....	84	1,012
Delhi	5,435	5,565	3,320	2,125	14	3	103	
TOTAL, 1917 ..	1,638,577	2,038,170	943,805	987,148	22,820	4,810	7 572	
TOTALS ..	1916 ..	1,669,070	2,098,379	980,525	10,14,891	23,186	6,139	73,619
	1915 ..	1,603,075	2,085,622	982,589	997,210	25,185	4,769	75,851
	1914 ..	1,634,224	2,120,472	1,031,374	992,922	23,554	4,949	67,631
	1913 ..	1,658,405	2,141,362	1,051,888	987,592	22,459	4,735	74,652
	1912 ..	1,659,254	2,132,813	1,053,657	977,267	21,650	4,313	75,765
	1911 ..	1,502,995	2,196,679	966,783	897,786	21,173	3,906	70,832
	1910 ..	1,447,732	2,188,951	922,379	872,298	21,029	4,439	64,677
	1909 ..	1,421,350	2,185,621	914,500	854,667	22,174	3,349	61,502
	1908 ..	1,412,817	2,184,207	897,462	860,065	24,535	3,625	58,496
	1907 ..	1,411,653	2,186,827	880,706	851,097	21,296	3,505	60,223
1906 ..	1,404,777	2,180,507	864,493	860,486	22,776	3,911	54,041	

- (a) Includes 9 persons (9 handed over to Military Authorities) in 1917.
Includes 8 persons (9 handed over to Military Authorities) in 1916.
" 10 " (10 handed over to Military Authorities) in 1915.
" 25 " (9 on dormant file, 16 handed over to Military Authorities) in 1914.
" 30 " (13 " 17 " " to Military Authorities) in 1913.
" 149 " (139 " 9 " " " and 1 sent to Naval Authorities) in 1912.
" 203 " (171 " 35 " " to Military Authorities) in 1911
" 128 " (117 " 11 " " to Military Authorities) in 1910
" 26 " (10 " 14 " " " " and 2 referred under Section 307, Criminal Procedure Code) in 1909.

(b) Includes 2 persons remanded for retrial in 1917.

(c) Excludes the commitment of 4 persons quashed by the High Court in 1917.

(d) Excludes 4 persons whose cases are pending by reason of their being insane.

PRINCIPAL POLICE OFFENCES

CASES.

Administrations.	Offences against State and Public Tranquility.		Murder.		Other serious Offences against the Person.		Dacoity.		Cattle Theft.		Ordinary Theft.		House-trespass and Housebreaking with intent to commit Offence.	
	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.	Reported.	Conviction obtained.
Bengal	2,292	943	503	60	6,416	1,497	527	57	1,131	484	29,163	5,104	49,357	2,863
Calcutta	144	73	22	3	584	171	2	..	26	18	4,696	1,294	1,226	228
Suburbs														
Bihar and Orissa ..	1,009	358	250	49	2,874	628	367	37	996	325	16,975	3,257	19,867	1,233
United Provinces ..	1,760	827	851	265	8,954	2,891	833	162	788	981	34,766	5,691	61,734	4,492
Punjab	1,234	432	576	237	5,975	1,879	58	26	2,472	719	7,641	2,109	16,425	1,935
Delhi	23	3	4		113	19	..		8	3	455	133	457	50
N.-West Frontier Pro.	182	100	357	191	1,225	602	146	24	90	33	1,058	315	1,680	304
Burma	764	408	674	155	10,253	3,055	292	62	4,988	1,349	16,643	5,849	9,796	3,154
Rangoon	29	9	13	2	364	105	12	2	..	..	1,252	486	304	112
Central Provinces and Berar	431	184	245	92	2,402	732	79	16	791	345	20,914	2,102	13,526	1,325
Assam	691	262	88	27	1,426	365	36	2	457	148	5,061	1,072	7,240	739
Coorg	5	5	2	3	45	22	..	..	13	9	215	71	39	15
Madras	1,639	612	802	172	5,295	1,463	549	73	4,312	1,240	23,373	5,420	16,407	2,481
Bombay	953	293	442	150	3,687	1,104	149	41	3,114	913	11,476	4,118	10,523	2,038
Bombay Town & Island ..	78	66	27	12	720	321	..	..	..	..	5,709	3,034	1,326	280
TOTAL, 1917	11,234	4,575	4,856	1,428	50,443	14,354	3,050	506	23,194	6,567	179,427	40,055	209,907	21,239
1916. {	11,440	4,651	4,773	1,388	51,459	15,277	3,286	563	26,354	7,516	170,549	41,502	217,295	21,655
1915. {	11,698	4,753	1,307	4,757	51,795	15,186	3,730	733	28,382	8,248	188,286	43,572	235,509	22,642
1914. {	11,706	4,740	1,494	4,624	52,522	15,324	2,770	457	27,329	7,926	178,824	39,664	216,817	21,296
1913. {	12,172	4,798	1,397	4,471	52,948	15,458	2,494	397	27,261	7,495	174,737	37,685	205,860	20,014
1912. {	12,414	4,716	1,308	4,430	52,337	14,763	2,512	413	27,254	7,171	176,091	38,556	199,480	20,178
TOTALS .. {	11,873	4,569	1,281	4,163	49,308	14,123	2,454	367	25,932	6,789	166,304	37,501	205,274	20,065
1910. {	11,700	4,599	1,092	4,031	47,750	13,749	2,150	369	27,237	7,200	159,280	37,279	199,604	19,784
1909. {	11,919	4,614	1,143	3,885	44,960	12,947	2,524	453	27,833	7,710	169,451	40,872	207,283	21,296
1908. {	12,111	4,797	1,203	4,014	43,838	12,678	2,984	659	29,456	8,927	194,246	48,448	236,280	21,972
1907. {	12,181	4,454	1,106	3,603	42,921	12,506	2,360	428	27,809	7,492	178,898	41,173	212,299	21,679
1906. {	12,386	4,490	1,090	3,555	42,993	12,452	2,085	419	27,577	7,831	184,915	45,112	203,701	22,654

* Including some cases of cattle theft.

JAILS.

Jail administration in India is regulated generally by the Prisons Act of 1894, and by rules issued under it by the Government of India and the local governments. The punishments authorised by the Indian Penal Code for convicted offenders include transportation, penal servitude, rigorous imprisonment (which may include short periods of solitary confinement), and simple imprisonment. Accommodation has also to be provided in the jails for civil and under-trial prisoners.

The origin of all jail improvements in India in recent years was the Jail Commission of 1889. The report of the Commission, which consisted of only two members, both officials serving under the Government of India, is extremely long, and reviews the whole question of jail organization and administration in the minutest detail. In most matters the Commission's recommendations have been accepted and adopted by Local Governments, but in various matters, mainly of a minor character, their proposals have either been rejected *ab initio* as unsuited to local conditions, abandoned as unworkable after careful experiment or accepted in principle but postponed for the present as impossible.

The most important of all the recommendations of the Commission, the one that might in fact be described as the corner stone of their report, is that there should be in each Presidency three classes of jails: in the first place, large **central jails** for convicts sentenced to more than one year's imprisonment; secondly, **district jails**, at the head-quarters of districts; and, thirdly, **subsidiary jails** and "lock-ups" for under-trial prisoners and convicts sentenced to short terms of imprisonment. The jail department in each province is under the control of an Inspector-General; he is generally an officer of the Indian Medical Service with jail experience, and the Superintendents of certain jails are usually recruited from the same service. The district jail is under the charge of the civil surgeon, and is frequently inspected by the district magistrate. The staff under the Superintendent includes, in large central jails, a Deputy Superintendent to supervise the jail manufactures, and in all central and district jails one or more subordinate medical officers. The executive staff consists of jailors and warders, and convict petty officers are employed in all central and district jails, the prospect of promotion to one of these posts being a strong inducement to good behaviour. A Press Note issued by the Bombay Government in October, 1915, says:—"The cadre and emoluments of all ranks from Warder to Superintendent have been repeatedly revised and altered in recent years. But the Department is not at all attractive in its lower grades. The two weak spots in the jail administration at the moment are the insufficiency of Central Prisons and the difficulty of obtaining good and sufficient warders."

Employment of Prisoners.—The work on which convicts are employed is mostly carried on within the jail walls, but extra-mural employment on a large scale is sometimes allowed, as, for example, when a large

number of convicts were employed in excavating the Jhelum Canal in the Punjab. Within the walls prisoners are employed on jail service and repairs, and in workshops. The main principle laid down with regard to jail manufactures is that the work must be penal and industrial. The industries are on a large scale, multifarious employment being condemned, while care is taken that the jail shall not compete with local traders. As far as possible industries are adapted to the requirements of the consuming public departments, and printing, tent-making, and the manufacture of clothing are among the commonest employments. Schooling is confined to juveniles; the experiment of teaching adults has been tried, but literary instruction is unsuitable for the class of persons who fill an Indian jail.

The conduct of convicts in jail is generally good, and the number of desperate characters among them is small. Failure to perform the allotted task is by far the most common offence. In a large majority of cases the punishment inflicted is one of those classed as "minor." Among the "major" punishments fetters take the first place. Corporal punishment is inflicted in relatively few cases, and the number is steadily falling. Punishments were revised as the result of the Commission of 1889. Two notable punishments then abolished were shaving the heads of female prisoners and the stocks. The latter, which was apparently much practised in Bombay, was described by the Commission as inflicting exquisite torture. Punishments are now scheduled and graded into major and minor. The most difficult of all jail problems is the internal maintenance of order among the prisoners, for which purpose paid warders and convict warders are employed. With this is bound up the question of a special class of well-behaved prisoners which was tried from 1905 onwards in the Thana Jail.

Juvenile Prisoners.—As regards "youthful offenders"—i.e., those below the age of 15—the law provides alternatives to imprisonment, and it is strictly enjoined that boys shall not be sent to jail when they can be dealt with otherwise. The alternatives are detention in a reformatory school for a period of from three to seven years, but not beyond the age of 18; discharge after admonition; delivery to the parent or guardian on the latter executing a bond to be responsible for the good behaviour of the culprit; and whipping by way of school discipline.

The question of the treatment of "young adult" prisoners has in recent years received much attention. Under the Prisons Act, prisoners below the age of 18 must be kept separate from older prisoners, but the recognition of the principle that an ordinary jail is not a fitting place for adolescents (other than youthful habituals) who are over 15, and therefore ineligible for admission to the reformatory school, has led Local Governments to consider schemes for going beyond this by treating young adults on the lines followed at Borstal, and considerable progress has been made in this direction. In 1905, a special class for selected juveniles and young adults was established at the Dharwar

jail in Bombay; in 1908 a special juvenile jail was opened at Alipore in Bengal; in 1909 the Meiktila jail in Burma and the Tanjore jail in Madras were set aside for adolescents, and a new jail for juvenile and "juvenile adult" convicts was opened at Bareilly in the United Provinces; and in 1910 it was decided to concentrate adolescents in the Punjab at the Lahore District jail, which is now worked on Borstal lines. Other measures had previously been taken in some cases; a special reformatory system for "juvenile adults" had, for example, been in force in two central jails in the Punjab since the early years of the decade, and "Borstal enclosures" had been established in some jails in Bengal. But the public is slow to appreciate that it has a duty towards prisoners, and but little progress has been made in the formation of Prisoners' Aid Societies except in Bombay and Calcutta, though even in those cities much remains to be done.

Reformatory Schools.—These schools have been administered since 1899 by the Education department, and the authorities are directed to improve the industrial education of the inmates, to help the boys to obtain employment on leaving school, and as far as possible to keep a watch on their careers.

Transportation.—Transportation is an old punishment of the British Indian criminal law, and a number of places were formerly appointed for the reception of Indian transported convicts. The only penal settlement at the present time is Port Blair in the Andaman Islands. Under existing rules convicts sentenced to transportation for life, or for a term of years of which six have still to run, may be transported to the Andamans, subject to their being physically fit, and to some other conditions in the case of women. The sanctioned scheme contemplates five stages in the life of a male transported convict, the first six months being passed in a cellular jail, the next eighteen months in association in a jail similar to those of the Indian mainland, and the following three years as a convict of the third class kept to hard gang labour by day and confined in barracks by night. Having thus completed five years, a convict may be promoted to the second class, in which he is eligible for employment in the various branches of the Government services or in the capacity of servants to a private resident. After five years so spent, a well-behaved convict enters the first class, in which he labours under more favourable conditions, or is granted a ticket enabling him to support himself, with a plot of land. He may now send for his family or marry a female convict. The three later stages of this discipline have been in force for many years, and the first for some time, the cellular jail having been finished in 1905; but the associated jail for the second stage has not yet been built. Females are kept at intramural work under strict jail discipline for three years; for the next two years they are subjected to a lighter discipline, and at the end of five years they may support themselves or marry. Promotion from class to class depends on good conduct. The convicts are employed in jail service, in the erection and repair of jail buildings, in the commissariat, medical, marine, and forest departments, in tea-gardens and at other agricultural work, and in various jail manu-

factures. Ordinary male convicts sentenced to transportation for life are released, if they have behaved well, after twenty years, and persons convicted of dacoity and other organised crime after twenty-five. *Thags* and professional prisoners are never released. Well-behaved female convicts are released after fifteen years. The release is sometimes absolute and sometimes, especially in the case of dacoits, subject to conditions, *e.g.*, in regard to residence. In some cases released convicts prefer to remain in the settlement as free persons. The settlement is administered by a superintendent, aided by a staff of European assistant and Indian subordinates. The convict population of Port Blair amounted in 1915-16 to 12,425, consisting of 11,864 males and 561 females. The total population of the settlement was 17,331.

Commission of Enquiry, 1919.—A committee was appointed to investigate the whole system of prison administration in India with special reference to recent legislation and experience in Western countries. The constitution of the committee is as follows: Chairman: the Hon'ble Sir Alexander Cardew, K.C.S.I., Member of the Executive Council, Madras. Members: the Hon'ble Sir James Du-Boulay, K.C.I.E., C.S.I., Secretary to the Government of India, Home Department; Lt.-Col. J. Jackson, C.I.E., I.M.S.; Inspector-General of Prisons, Bombay; Lt.-Col. Sir Walter J. Buchanan, K.C.I.E., I.M.S., Inspector-General of Prisons, Bengal; Khan Bahadur Hamid Hussain, Delhi; Mr. D. M. Durai Raja, B.A., B.L., Madras; Mr. N. G. Mitchell-Innes, Inspector of Prisons, Home Office, London. Secretary: Mr. D. Johnston, I.C.S.

The Committee's inquiries have particular reference to the following subjects, namely:—

(1) The efficiency and appropriateness of the existing systems of prison administration and restraint on liberty in India, including the Andamans and any settlements constituted under the Criminal Tribes Act, 1911; (2) the possibility of strengthening the reformatory influence of prison administration and discriminating in regard to the treatment of criminals of different classes and ages and, (3) the best means of assisting prisoners after release to regain a position in society.

Reasons for Inquiry.—A Government of India resolution explained that this fresh investigation is consistent with the manner in which prison management has developed in this country. Four general enquiries have already been held in the years 1838, 1864, 1877, and 1888-89, respectively, into the whole question of the administration of jails. As a general statement, it is not unfair to say that attention has mainly been directed hitherto to the improvement of prison administration on lines and on a standard which, in recent times, have undergone considerable modifications at any rate in the West. This was indeed inevitably the case when an attempt was first made in 1838 to deal with the subject comprehensively and thoroughly. The foundations of an efficient system had practically still to be made. Diversity of practice in different provinces was the rule rather than the exception, and this complaint recurs even in connection with the latest inquiry of 1888-89. The

Prisons Act of 1894 (Act IX of 1894) was the first recognition by the legislature that in certain respects uniformity must be insisted upon and its enactment was the result of Surgeon-Major Lethbridge's recommendations as subsequently re-examined in 1891-92 by a departmental committee.

Modern Developments.—A further reason for this investigation is that ideas on the subject of the treatment of prisoners have advanced rapidly in recent years, largely under the stimulus of Quinquennial International Conferences of which the first was held in London in 1872 and the latest in America in 1910, and the deliberations of these bodies point to the importance of reformatations as a main end to be sought for in a large number of cases. The Probation of Offenders' Act, 1907, the Prevention of Crimes Act, 1908, and the Children's Act of the latter year are all instances of modern legislation on the subject, of which the Borstal system (with the Aftercare Borstal Association, and the encouragement given to the Discharged Prisoners' Aid Societies are conspicuous results. The Government of India are well aware of the differences in prison practice in England and India, and they do not desire in any way to imply that all the latest experiments of the West are necessarily suitable for introduction in the East, but they are of opinion that the

subject well merits detailed expert examination if the prevalent system in this country is to be saved from the reproach that it is failing to keep pace with modern ideas. It is true that in various provinces experiments with the Borstal system and with preventive methods applied to criminal tribes are being made, but action is being taken by provinces individually and the scrutiny and co-ordination of the results attained are likely to ensure that the lines of future policy are defined and mistakes avoided in the early stages. Exact uniformity of procedure in all the provinces is no doubt impossible, and possibly undesirable, but with adaptation or degree and detail to varying local conditions, there is no reason why the general principles governing the treatment of criminals should not be the same throughout the country.

There remains the very important subject of transportation, about which much has been written in the past and into a discussion of the merits of which it is not proposed to enter, but recent inquiries and events have led the Government of India to doubt whether the administration of the Andamans as a penal settlement is not susceptible with advance of material change or whether in fact, the continuance of the settlement in its present shape is in itself expedient, an inquiry in this direction may be expected to yield results of special value.

The variations of the jail population in British India during five years are shown in the following table:—

	1916.	1915.	1914.	1913.	1912.	1911.
Jail population of all classes on 1st January	122,282	112,015	105,555	101,908	91,876	102,991
Admissions during the year	550,971	568,280	516,098	492,308	492,820	470,513
Aggregate	673,253	680,295	621,653	594,216	584,696	573,504
Discharged during the year from all causes	557,525	558,008	509,638	488,677	482,786	481,622
Jail population on 31st December	115,728	122,287	112,015	105,539	101,910	91,882
Convict population on 1st January	107,806	98,963	92,913	89,287	79,668	91,505
Admissions during the year	173,441	180,466	168,723	160,851	159,424	152,396
Aggregate	281,247	279,429	261,636	250,138	239,092	243,901
Released during the year	175,587	163,508	159,468	154,494	147,292	151,936
Transported beyond seas	1,535	1,486	1,319	1,566	1,382	1,138
Casualties, &c.	2,900	2,616	2,429	2,053	2,084	2,222
Convict population on 31st December.	102,208	107,811	98,963	92,913	89,287	79,668

The daily average number of prisoners, which had steadily decreased since 1908, rose slightly in 1913 to nearly the figure of 1911. The fall in 1912 was, however, largely attributable to the release of convicts and civil prisoners on the occasion of the Delhi Durbar. The increase in 1913 was distributed among all provinces except the United Provinces of Agra and Oudh and Coorg, in which the figures continued to show decreases.

More than one-half of the total number of convicts received in jails during 1918 came from the classes engaged in agriculture and cattle tending, over 141,000 out of 166,000 are returned as illiterate.

The percentage of previously convicted prisoners was 19·65 as against 19·93 in 1917 while the number of youthful offenders rose from 327 to 364. The following table shows the nature and length of sentences of convicts admitted to jails in 1916 to 1918 :—

Nature and Length of Sentence.	1918.	1917.	1916.
Not exceeding one month	37,061	39,063	42,669
Above one month and not exceeding six months..	66,466	63,124	66,388
„ six months „ one year ..	34,018	31,488	34,725
„ one year „ five years ..	22,371	21,154	23,962
„ five years „ ten „ ..	2,966	2,564	2,631
Exceeding ten years	309	212	345
Transportation beyond seas—			
(a) for life	1,385	1,313	1,197
(b) for a term	859	705	745
Sentenced to death	763	752	791

The total daily average population for 1918 was 97,253; the total offences dealt with by criminal courts was 169, and by Superintendents 131,532. The corresponding figures for 1917 were 96,980, 179 and 144,237 respectively.

The total number of corporal punishments again showed a decrease, viz., from 265 to 217. The total number of cases in which penal diet (with and without solitary confinement) was prescribed was 4,628 as compared with 5,507 in the preceding year

Total expenditure increased from £652,582 to £750,826, and total cash earnings from £95,309 to £96,450; there was, consequently, an increase of £96,649 in the net cost to Government.

The death rate increased from 18·83 per mille in 1917 to 41·97 in 1918. The admissions to hospital were higher, and the daily average number of sick rose from 27·61 to 36·65. The chief causes of death were tubercle of the lungs, dysentery and pneumonia.

The Laws of 1919

BY

RATANLAL AND DHIRAJLAL

(Editors, "Bombay Law Reporter").

ALTHOUGH the war-cloud has happily lifted itself, yet the legislation seems to be surcharged with the after-effects of the war. The post-war problems that have followed in the wake of the war will demand the best attention of the legislator in India as in other countries also.

1. The Local Authorities Pensions and Gratuities Act.—The law hitherto empowered the local authorities to grant pensions and gratuities to employes who might be wounded and to the families of employes who might be killed in execution of their duty. This Act goes a step further and enables the local authority to grant a pension or a gratuity to an employe or to his family when he has been incapacitated or has lost his life in the service of the State. It is, therefore, enacted that the local Government may grant a pension or gratuity to any officer thereof who may, since the 4th August 1914, have been wounded or otherwise incapacitated in the service of Government or to the widow or child of any such officer who may have died in consequence of injuries received or illness contracted since the 4th August 1914 in the course of such service (s. 3). This extra grant may be in addition to the pension or gratuity granted already; it will not ordinarily exceed the amount of pension or gratuity payable in case his employment had been for service for the same time and on the same pay under Government (s. 4).

2. The Indian Paper Currency (Amendment) Act.—On the 7th December, 1918, the Governor-General of India promulgated an Ordinance increasing the maximum limit for the issue of Currency Notes against British Treasury Bills by fourteen crores of rupees to eighty crores of rupees. The present Act embodies the provisions of that Ordinance.

3. The Motor Spirit (Duties) Amendment Act.—In February 1917, the Government of India passed Act II of 1917 providing for the imposition and levy of an excise and customs duty of six annas a gallon of motor spirit. The duty was imposed as a war measure to conserve the use of motor spirit in India. As much it has served out its purposes and is timed to expire at the end of six months after the conclusion of the war. But the tax which originated in administrative necessities, has been found in its working to be a useful source of revenue. The duration clause has therefore been removed and the Act placed permanently in the Indian Statute Book.

4. The Income Tax (Amendment) Act.—This Act raises the minimum limit of taxable income from Rs. 1,000 to Rs. 2,000 per annum. It came into force on the 1st April 1919. The scale under the new Act stands as below:—

1. No tax: when the taxable income is less than Rs. 2,000

2. Five pies in the rupee: when the taxable income is more than Rs. 2,000 and less than Rs. 5,000.

3. Six pies in the rupee: when the total income is more than Rs. 5,000 but is less than Rs. 10,000.

4. Nine pies in the rupee: when the total income is more than Rs. 10,000 but is less than Rs. 25,000.

5. One anna in the rupee: when the total income is Rs. 25,000 or upwards.

5. The Termination of the Present War (Definition) Act.—During the continuance of the war a number of emergency Acts have been passed and have been timed to exist during the continuance of the war and for six months thereafter. The war came to an end as a fact on the 11th November 1918; but though more than a year has elapsed since then, the peace terms are not yet finally settled. It is necessary, therefore, to keep in existence all the emergency measures till peace is firmly settled. An artificial date will therefore be fixed for the termination of the war. A statute (8 & 9 Geo. V, c 59) has already been passed in England for the purpose. The present Act is on the lines of the English Statute and provides that the present war shall be treated as having continued to and as having ended on such date as His Majesty in Council may declare in that behalf in pursuance of the provisions of the Termination of the Present War (Definition) Act, 1918 (s. 2).

6. The Indian Oaths (Amendment) Act.—The provisions of the Indian Oaths Act 1873 do not apply to proceedings before Courts Martial or oaths and prescribed by any law (s. 3). They are further made inapplicable to oaths, affirmations or declarations prescribed "by or under any Instruction under the Royal Sign Manual of His Majesty" (s. 2). The reason for this exclusion is that s. 16 of the Oaths Act of 1876 abolished official oaths. These have been now revived, for it has been found that the assumption of their high offices by Governor-General, Members of Executive Councils and Chief Commissioners is hitherto lacking in any formality of a nature to mark the serious nature of the occasion or the weight of responsibility involved. The effect of this Act is that oaths or affirmations of allegiance and office should in future be taken with due solemnity by the officials concerned at the time of entering upon the discharge of their duties.

7. The Indian Defence Force (Amendment) Act.—In the ordinary course of events, the Indian Defence Force Act of 1917 is timed to expire after six months from the conclusion of the war. That period is by this Act extended to one year. The Indian Defence Force which

has been called into existence owing to the exigencies of the war it has been found necessary to maintain under post-bellum conditions at any rate till the demobilisation of the regular army is completely carried out.

8. The Negotiable Instruments (Amendment) Act.—In the case of *Dosabhai v. Virchand* reported in the *Bombay Law Reporter*, Vol. XXI, p. 1, Mr. Justice Hayward held that a cheque from which the word "bearer" has been struck out and if there is no substitution of the word "order" is not negotiable within the meaning of the Negotiable Instruments Act 1881. There was a custom of trade in the Bombay market which regarded such cheques as order cheques; but the learned Judge treated the custom as void. The present Act has been enacted to negative the effect of the decision and now such cheques are to be treated as order cheques. It relieves traders from considerable inconvenience.

9. The Punjab Courts (Supplementing) Act.—On the 1st of April 1919, a High Court of Judicature was established for the Province of the Punjab at Lahore by Royal Letters Patent. It replaced the Punjab Chief Court, which till then was the Supreme Court of Judicature within that Province. The pending work of the Chief Court had to be transferred to the newly instituted High Court. This Act therefore enacts that all suits, appeals, revisions, applications, reviews, executions and other proceedings whatsoever, whether Civil or Criminal, pending in the Chief Court shall be continued and concluded in the High Court at Lahore as if the same had been instituted in such High Court (s. 2).

10. The Excess Profits Duty Act.—This is a purely emergency measure due to war conditions. It was introduced as a bill on the 13th December 1918 and declared to have come into force on the 20th March 1919. In principle, it is not open to any serious objection. Persons who have reaped excess profits owing to war conditions are called upon to contribute fifty per cent. of their excess profits to the State exchequer. All incomes below thirty thousand rupees are exempted upon the operation of this Act. The operative section provides "Subject to the provisions of this Act, there shall in respect of any business to which this Act applies, be charged, levied and paid on the amount by which the profits in the accounting period exceed the standard profits, a duty of an amount equal to fifty per cent. of that excess. Provided that the amount of the said duty shall not exceed such sum as would reduce the profits in the accounting period below thirty thousand rupees" (s. 4). What the standard profits are has been defined by s. 6. They mean: (1) an amount calculated at the rate of 10 per cent. or at such rate not being less than 10 per cent. as may be prescribed, on the capital of the business as existing at the end of the accounting period, or (2) at the option of the person by whom the duty is payable (i) if the profits of the business have been assessed in 1913 and 1914 for the purposes of income tax—the aggregate of half of the profits so assessed and half of the interests, if any, received in these years on securities forming part of the assets of the business;

or (ii) if the profits of the business have been assessed for the said purposes in 1913 and 1914 and in two only of three years 1915, 1916, 1917—the aggregate of one-fourth of the profits so assessed; or (iii) if the profits of the business have been assessed for the said purposes in all the five years 1913 to 1917—the aggregate of one-fourth of profits assessed in the years 1913 and 1914 and in each two of the years 1915, 1916 and 1917 as may be selected by the said person. Power is given to the Collector by s. 7 to make allowances for special circumstances; and appeal against assessment is provided to the Chief Revenue authority (s. 8). The Governor-General in Council is also authorised to deal with hardship in case of a class of business (s. 9). When an income is liable to be assessed to excess profits duty as well as to super-tax, it will be charged only once and with the tax which yields the highest duty (s. 19). There have been certain exemptions from the operation of this Act. They are:—(1) any business the income of which is agricultural income; (2) offices or employments; (3) any profession depending on the personal qualification of the person by whom the profession is carried on.

11. The Anarchical and Revolutionary Crimes Act.—This is what is popularly known as the **Rowlatt Act**. Probably no other Act of the Indian Legislature has touched Indian susceptibility to the extent that this Act has done. It was passed against the unanimous opinion of the elected non-official members of the Indian Legislative Council. It is a temporary measure timed to live for three years certain. It owes its origin to the recommendations made by the Committee presided over by Sir Sidney Rowlatt, a Judge of the King's Bench Division in England. The Committee was appointed in 1917, among other things, to examine and consider the difficulties that have arisen in dealing with conspiracies and to advise as to the legislation, if any, necessary to enable the Government to deal effectively with them. The Act contains several parts. Part 1 deals with the trial of offenders and defines offences, establishes Courts and provides procedure to be followed at trials. The provisions of the Act can be put into force in any area only by a notification published in the *Gazette of India*, and that too where the Governor-General in Council is satisfied that anarchical or revolutionary movements are being promoted and that scheduled offences in connection with such movements are prevalent to such an extent that it is expedient in the interest of public safety to provide for the speedy trial of such offences (s. 3). The initiation of proceedings under the Act can only be by the Local Government ordering any officer of Government to prefer a written information to the Chief Justice against any person. The information must state the offence charged and the known name and place of residence and occupation of the accused, and the time and place when and where the offence is charged to have been committed and all particulars, within the knowledge of the prosecution, of what is intended to be proved against the accused. A copy of the information should be served on the accused (s. 4). The trial of the case begins before a special bench of three Judges of the

High Court nominated by the Chief Justice (s. 5). The place of sitting may be fixed or varied (s. 6). The provisions of the Criminal Procedure Code are made applicable so far as they are not repugnant to the Act (s. 7). The trial is to commence by reading of the information and the prosecutor has to state shortly the evidence he expects to lead for the prosecution. The Court is to follow the procedure prescribed by the Criminal Procedure Code for the trial of warrant cases by Magistrates (s. 8). If a charge is framed, the Court is bound to grant an adjournment of 14 days, if the accused so desires (s. 9). At the trial the evidence of each witness is to be recorded in full (s. 10). It is open to the Court to prohibit or restrict the publication of reports of trial (s. 11). Section 12 protects the accused in a variety of ways. Till the closing of the case for the prosecution, no questions can be asked to him. Thereafter and before the accused enters on his defence, the Court shall inform him that he can give evidence on oath on his own behalf, but that if he elects to do so, he is liable to be cross-examined. In case he declines the examination, he is liable to be questioned generally on the case as provided in s. 342 of the Criminal Procedure Code; but this process will be saved, if he agrees to be examined. The unwillingness of the accused to be examined on oath does not place him at any disadvantage. The vexed and much debated question of the right of reply by the prosecution is definitely settled. The accused loses his right of reply if he calls and examines any witness (s. 13). If there is any difference of opinion among the members of the Court, the opinion of the majority is to prevail (s. 14). The judgment of the Court is made final and conclusive; and no appeal is allowed from it (s. 17). There are special rules of evidence which go far beyond the provisions of the Indian Evidence Act (I of 1872). When it appears that a witness is dead, or cannot be found or is incapable of giving evidence and it is proved that such death, disappearance or incapacity has been caused in the interests of the accused, then the statement made by such person to a Magistrate and read over, explained to and signed by him may be admitted in evidence (s. 18).

Part II deals with a different state of things. It provides for preventive measures of a precautionary nature and enables Government to bind down persons to good behaviour. The provisions of this part can be put into operation only by a notification in the Gazette of India by the Governor-General in Council and for a particular area. They can come into play only when the Governor-General in Council is satisfied that anarchical or revolutionary movements which are likely to lead to the commission of scheduled offences are being extensively promoted in any area (s. 21). The Local Govt. can then place all the materials in its possession relating to the case before a judicial officer who is qualified for appointment to a High Court and take his opinion thereon. If such officer is satisfied that action is necessary, the Local Government may give all or any of the following directions: such person shall (1) execute bond with or without sureties agreeing that he will not take any

part in any of the offences alleged against him for a period of one year or (2) shall notify his residence and any change of residence; (3) or shall remain or reside in any part of British India; or (4) shall report himself to the officer in charge of the police station nearest to his residence at stated periods (s. 22).

The order under s. 22 is to be served on the person concerned in the manner of a summons (s. 23). The appointment of investigating authority is provided for in s. 30. It is to consist of three persons, two of whom shall be persons who have held judicial office not inferior to that of a District and Sessions Judge and one shall be a person not in the service of the Crown in India. When an order is once passed under s. 22 the Local Government have to submit all the papers in the case to the investigating authority. The inquiry before the investigating authority shall be *in camera*. The accused will in every case be given a reasonable opportunity of appearing before it at some stage of the proceedings. He is to have explained the nature of the charge made against him and he can make any explanation he may have to offer. The investigating authority shall report in writing to the Local Government the conclusions at which it has arrived (s. 26). On receipt of the report, the Local Government may discharge the order passed under s. 22 or may make any other order which is authorised by the section (s. 27). If the accused disobeys the order he is liable to be sentenced to imprisonment for 6 months or to pay a fine of Rs. 500 (s. 28). Provision has also been made for the appointment by Local Government of Visiting Committees, whose function will be to report upon the welfare of persons kept under restraint (s. 31).

Part III of the Act is more general in character. It gives powers to arrest persons and search places. Like the foregoing two parts, it can be put into operation by a notification published in the Gazette of India by the Governor-General in Council. It can be applied to any area where revolutionary or anarchical movements are apprehended. The procedure prescribed for action is briefly as follows. Where the Local Government are of opinion that any person in the prescribed area is concerned in any scheduled offence they are to place all materials before a judicial officer who is qualified for appointment to a High Court and take his opinion thereon. If such officer agrees, the Local Government may make an order under s. 22 and may further order (1) the arrest of any such person without warrant; (2) the confinement of any such person in any place and (3) the search of any place specified in the order (s. 34). The arrest, if made, cannot ordinarily extend beyond 7 days; but if the Local Government so directs, it may extend to 14 days (s. 35).

The fourth part deals with persons already under executive control. It provides against the contingency of the expiration of the Defence of India Act which being a war measure is timed to exist during the continuance of the war and for 6 months thereafter. Persons already under detention at that date are to be deemed under detention under the provisions of this part (s. 39). The last two sections

are very general in their scope. Section 42 provides that orders passed under the Act cannot be called in question by the Courts. The last section enacts that the powers given by the Act are in addition to, and not in derogation of, any other powers already conferred by any other enactment.

12. The Poisons Act.—The former Poisons Act I of 1904 was found on experience to be lacking in control. The present Act is meant to give effect to control of Local Governments empowering them to regulate sale of poisons. They are given powers to make rules for (1) grant of licences to persons for poison for sale; (2) the classes of persons to whom licences can be given and the classes of persons to whom the poison may be sold; (3) the maximum quantity that can be sold; (4) the keeping by vendors of register of sales; (5) the safe custody of such poisons and the labelling of vessels and packages in which the poison is kept; and (6) the inspection and examination of such poison (s. 2). The Governor-General of India in Council has the power to prohibit importation into British India of any poison except under a license (s. 3). The Local Government have the power to regulate possession of any poison in any local area (s. 4). Penalty for breach of the provisions of the Act or of the rules made thereunder is, on first conviction, to imprisonment for three months and a fine of Rs. 500; and on second or subsequent conviction, to double the above penalty (s. 6). The District Magistrate and the Sub-Divisional Magistrate and the Commissioner of Police may issue a search warrant if he has reason to believe that any poison is kept at any place in contravention of the Act or its rules (7).

13. The Sea Customs (Amendment) Act.—There already has been local legislation in this country to prevent adulteration of food in general; but no power hitherto existed to prevent importation of adulterated foods and drugs by sea. This defect is sought to be remedied by amendment of s. 195 of the Sea Customs Act (VIII of 1878). The amendment provides that the Customs Collector may take samples of imported drugs or articles intended for consumption as food and submit them for examination by a specified officer of Government. The Act does not involve detention or seizure of the foods by the Customs authorities; but it is calculated to spur the Municipal health officers into action.

14. The Provident Funds (Amendment) Act.—This Act makes provisions for the old age of teachers in non-pensionable service of Government, by making the provisions of Act IX of 1897 applicable.

15. The Calcutta High Court (Jurisdictional Limits) Act.—The limits of the Original Side of the Calcutta High Court had been fixed as early as 1794. The marks and limits which existed then, are no longer to be found. These have been demarcated afresh and defined in this Act.

16. The Indian Naturalization (Amendment) Act.—Hitherto a certificate of naturalization once issued to an alien was liable to be recalled only on proof that the certificate had been obtained by false representations

or fraud. It has been found necessary that the certificate should be cancelled not only on those grounds but also when the person to whom it has been granted has shown himself by act or speech to be disaffected or disloyal to His Majesty or is shown to be otherwise unfit to continue to enjoy the privileges of British nationality. The English Act (5 & 6 Geo. V. c. 17) was accordingly amended in 1918 by (8 & 9 Geo. V. c. 38). The Indian Naturalization Act, XXX of 1882, is also similarly amended.

17. The Land Acquisition (Amendment) Act.—This Act is meant to put the registered societies, within the meaning of Co-operative Societies Act (II of 1912), on a par with companies; and enables them compulsorily to acquire any buildings sites required by them. It is designed to remove the difficulty experienced by those societies to secure sites for buildings.

18. The Repealing and Amending Act 1919.—This is a periodical measure resorted to by the legislature from time to time to weed out surplusage from Indian Acts. It also makes amendment consequent on the conversion of the Punjab Chief Court into the Lahore High Court.

19. The Indian Tariff (Amendment) Act.—This Act enables the Government of India to levy a duty of 15 per cent. on raw hides and skins exported to foreign countries with a rebate of 10 per cent. for hides and skins tanned within the Empire. In other words, raw hides and skins exported to and tanned outside the British Empire are liable to an export duty of 15 per cent; whilst those exported and tanned within the British Empire are saddled with an export duty of 5 per cent. only. There was an universal consensus of opinion so far as the imposition of duty was concerned; but some objection has been taken to the rebate clause. It cannot be doubted that the effect of the Act will be to encourage the tanning industry in India.

20. The Indian Arms (Amendment) Act.—On the 21st March 1919 the Government of India issued a Resolution (H D. No. 2125c) to the effect that from the 1st January 1920, with very few exceptions, every person of whatever caste, creed or nationality had to obtain a license for fire arms in his possession. This Resolution receives legislative sanction here. This Act also makes provision for custody of fire-arms after the 1st January 1920 when the possessor has not obtained a license.

21. The Indian Coinage (Amendment) Act.—The shortage of silver is sorely felt by every one in this country. It is also felt by Government. They had accordingly to replace two anna silver coins by nickel coins of the same denomination. There are two other small silver coins in circulation, namely, the four-anna and eight-anna pieces. They are also made liable to be converted into nickel currency. The former coin is to be 90 and the latter to be 105 grains troy in weight.

22. The Cantonments (Amendment) Act.—The Cantonment Committee are authorised to prohibit the practice of any profession or of

the carrying on of any trade, calling, or occupation in any part of the Cantonment otherwise than in accordance with the conditions of a license; and to levy fees for the grant and renewal of licenses. The Committee is further authorised to make rules for the suppression of brothels and for the effective prevention of prostitution in Cantonments.

23. The Cinematograph (Amendment) Act.—Before the Cinematograph Act II of 1918 could come into operation, it was found that some modifications were necessary to be introduced into it. The Local Government are given the authority to constitute Certifying Boards, not more than one half of whose members shall be officials. The certificate granted by these Boards are valid in the ordinary course throughout India. The certifying authority is given the power to require production before it of a film already certified by any other authority. It is also enacted that the Act may be introduced into any area piecemeal, in order to allow a preliminary period during which owners of films now in use may submit them to optional certification before the Act comes into force.

24. The Indian Companies Restriction Repealing Act.—During the progress of the war it was found expedient to conserve the monetary resources of the country by placing certain restriction on the power to call up capital by companies already floated or about to be floated. With the termination of the war, the necessity for the conservation having ceased to exist that Act is hereby repealed.

25. The Indian Merchant Shipping Law Amendment Act.—Section 5 of the Indian Merchant Shipping Act (V of 1863) exempts ships in the service of His Majesty or the Government of India from the provisions of the Act relating to investigations into shipping casualties. Section 114 of the Indian Merchant Shipping Act (I of 1859) exempts ships in the service of His Majesty from the provisions of that Act. The result of these exemptions has been that proper investigations cannot be made into shipping casualties occurring in connection with hired transports or of suitable disciplinary measures being taken against officers and crews of such vessels when found guilty of infringements of the shipping law and regulations. This anomaly has therefore been removed; and the exemptions are granted only to ships belonging to His Majesty or the Government of India.

26. The Indian Paper Currency (Further Amendment) Act.—The maximum of Currency

reserve which was fixed at 80 crores of rupees by Act II of 1919 is raised now to Rs. 100 crores, of which 80 crores must be in British Treasury Bills. Opportunity has also been taken to provide for the issue of notes against gold held on behalf of the Secretary of State in the United States of America or in transit therefrom to India.

27. The Indemnity Act.—Probably no Act of legislature has evoked more bitter controversy and sturdy opposition to its passing than the Indemnity Act. Early in March-April 1919, riots took place in the Punjab and other parts of India. To quell them, martial law was declared at those places and the assistance of the military was invoked to restore order. To examine into the working of the martial law, a Committee, known as the Hunter Committee, commenced its sittings from the beginning of November 1919. But before the Committee could sit and report, the Government of India thought it advisable to pass the Indemnity Act. It is claimed on behalf of the supporters of the Act that the military who had been called to meet an urgent situation promptly must be immediately protected. The opposers of the Act contend that the passing of the Act is premature. The provisions of the Act are few and simple. Section 2 provides that no suit or legal proceeding whatsoever, whether civil or criminal, shall lie in any Court of law, against any officer of Government or against any other person acting under the orders of such officers, or in respect of any Act done or ordered to be done for the purpose of maintaining or restoring order in any part of British India where martial law was enforced between 30th March 1919 and the 26th August 1919, provided that such officer has acted in good faith and in a reasonable belief that his action was necessary for the said purposes. A certificate from a Secretary to Government that any Act was done under the orders of an officer of Government shall be conclusive proof thereof; and all action taken thereunder shall be deemed to have been taken in good faith unless the contrary is proved (s. 3). Every person confined under, and by virtue of, any sentence passed by a Court or authority constituted or appointed under martial law and acting in a judicial capacity shall be deemed to have been lawfully confined (s. 4). Where, under martial law, the property of any person has been taken or used by an officer of Government, the Governor-General in Council shall pay to such person reasonable compensation for any loss immediately attributable to such taking or using (s. 5).

Imperial Legislative Council.

The first meeting of the Imperial Legislative Council during the year took place on February 6. Following the usual practice, His Excellency the Viceroy delivered a lengthy speech reviewing generally the position of affairs. At the outset, he referred to the fact that the existence in India of definitely **Revolutionary Organisations** was an undoubted fact and said that among the legislative matters to be brought forward in that session, were two bills of the highest importance. One of these was a Bill to give effect to the recommendations of the **Rowlatt Commission**. "These recommendations," he said, "were unanimous and, coming as they did from persons who command the greatest authority, the Government of India decided that they should be brought before this Council in the shape of the necessary legislative measures. The very important powers which have enabled the public peace and order of India to be preserved during the war will shortly come to an end. It is essential in my judgment that they should be replaced by adequate substitutes." Referring to the appointment of a Joint Commission of officials and non-officials to suggest improvements in jail administration and the proposal to reform the **Arms Act**, His Excellency went on to discuss the Compulsory Education Bills, which were then in process of becoming law. In this connection he declared that the institutions for the training of vernacular teachers would have to be multiplied, enlarged and strengthened. His Excellency then adverted to the report of the **Indian Industrial Commission** which had been received since the previous meeting of the Council. "I regard," he said, "this report, as a state document of the greatest value and importance. With the underlying principles which form the basis of the Commission's recommendations, namely, the urgent necessity not only for the improvement of Indian industries but for the more active participation of Government in developing them, I imagine that there will be unanimity of opinion. It is essential that the Indian industries should be guided on the right lines at the early stages of their development. Few people, I imagine, would hesitate to agree that in order to ensure such guidance great expansion of scientific and technical advice at the disposal of industry in this country is essential, and the proposals of the Commission for the organisation of scientific and technical service forms probably the most important part of the Report." His Excellency concluded his remarks on the subject of the Industrial Commission's report with an expression of his appreciation of the arduous and successful work of Sir Thomas Holland and his coadjutors. After reference to the successful publicity work of the Government during the concluding stages of the war and the subsequent few months, and to the influenza epidemic and the needs of improving sanitation and the medical service in India, His Excellency referred at length to the changes which would be brought about when the **Reform Scheme** was applied to India. In particular, he dealt with the position which the existing Public Services in India would hold under a popular government. In this regard he said that the help of all the servi-

ces, trained, efficient and impartial, with their high standard of duty, in the public interest, is absolutely essential for great experiments of responsible government to succeed.

Sir William Vincent introduced the **Criminal Law (Emergency Powers) Bill**. In doing so he dwelt on the fact that Government, before the war, lacked effective measures for dealing with the growing revolutionary movements in the country. The aim of these movements was by dacoity, murder and other crimes of violence to promote a rising against the British Government and to render administration of the country impossible. The normal law was inadequate to cope with the movement. During the war, however, the Defence of India Act was passed which enabled the number of outrages to be reduced considerably. Sir William emphasised that the Bill was not in any sense aimed at political movements properly so called. It was definitely and distinctly intended and framed to cope with seditious crime. Even movements which might endanger or tend to endanger public safety could not be suppressed under the Bill unless they were plainly seditious activities. The Bill, he said, was divided into five parts. The first part enabled certain scheduled offences to be tried by a strong court, consisting of three High Court Judges, expeditiously without commitments and with no right of appeal. Part II provides Government with powers for taking preventive measures against seditious crime. Part III enables the Local Government, where there is reasonable ground for believing a person to have been concerned in a scheduled offence, to direct his arrest and confinement in such place and in such conditions as may be prescribed. Part IV applies the provisions of Part III automatically to persons known to have been concerned in revolutionary crime at present and who are under restriction under the Defence of India Act. In conclusion, Sir William Vincent emphasised that the Bill which was sought to be introduced was not aimed at patriots. It was aimed at criminals merely, its main object being the purification of politics from crime. He then introduced the Bill and moved that it be referred to a Select Committee. Mr. V. J. Patel moved that the consideration of the Bill be deferred till six months had elapsed after the expiry of the term of office of this Legislative Council. In doing so he declared that the whole country from one end to the other was entirely opposed to the measure. Mr. Surrendranath Bauerjia, Mr. Kamini Kumar Chandra, Mr. M. A. Jinnah, Pandit Madan Mohan Malaviya and Mr. K. V. Rangaswamy Iyengar all made speeches opposing the introduction of the Bill and supported Mr. Patel's motion. On the following day further opposition to the Bill was offered by Rao Bahadur B. D. Shukul, Dr. Tej Bahadur Sapru, Mr. G. S. Khaparde, Sir Gangadhar Chitnavis, the Raja of Mahmudabad, Sir Fazulbhoj Currimbhoj and a number of others. Sir Verney Lovett and Sir George Lowndes made speeches reiterating the conditions which made the Bill imperative and eventually a division was taken. Sir William's motion that the Bill be referred to a Select Committee was passed by 36 to 21.

Sir Sankaran Nair brought forward a Bill to enable local authorities to grant **pensions and gratuity** to employees or their families where the employee is incapacitated or lost his life in the service of the State. He also said that it was proposed to make the measure applicable in case of injury, disease or death which had occurred since 4th August 1914. The Bill was then formally introduced.

The Finance Member introduced the **Excess Profits Tax Bill**. In doing so, he estimated that the charge on India would be £ 30 millions and in the following year £ 8½ millions would be wanted. "We were now faced," he said, "with a possible deficit of £ 4 millions and additional taxation was inevitable. Large grants of money would be wanted for railways: Government would be left with only 3 millions to meet the 8½ millions required." The super-tax and the excess profits tax would not both be levied. The Government would take whichever was greater. He hoped to obtain some £ 7½ millions from the Excess Profits Tax. Government had carefully considered many suggestions for a new loan, but found themselves unable to accede to it. The representatives of the Bombay and Calcutta Chambers of Commerce opposed the Bill. Sir Fazulbhoy Currimbhoy also opposed the Bill speaking at some length. His main contention was that the need for such large sums of money did not now exist and that the new tax would unduly disturb trade and industry. These were the only opponents of the Bill which was turned over to a Select Committee with instructions to report by March 12.

At the meeting on the 26th February, a number of questions were asked relating to the **Military Accounts Department and housing**. The replies from Government revealed the following facts, that the Government of India were prepared to place sums at low rates of interest at the disposal of Local Governments for housing the working-classes: that very few restrictions were now placed on the flotation of new companies; and that the Cotton Committee had not then sent in their report. The report on the working of the Indian Munitions Board was being prepared but could not be published at the moment. The Commander-in-Chief said that the cost of the Munitions Board up to the end of December had been 74 lakhs of rupees. Mr. Patel next introduced a Bill to amend the **Electricity Act** and explained that he wished to introduce the following clause into the Act.—“(b) Before granting a license the Local Government shall consult every local authority concerned and, where such local authority advances any objection to the grant of a license, the Local Government shall take such objection into consideration and if, in its opinion it is insufficient it will record in writing and communicate to such authority its reasons for such opinion provided that such objection is based on rival claim for such a license the Local Government shall give preference to the application of the local authority unless there exist special circumstances which, in its opinion, renders such preference inexpedient.” Sir Claude Hill said that Government had no objection to the Bill being referred to the Local Governments, but he would not express any opinion until the Local Governments had report-

ed. The Bill was then introduced. Mr. Patel asked permission to introduce a Bill to amend the **Negotiable Instruments Act, 1881**. Mr. Patel explained that his amendment referred to cheques and said that it had been recently ruled by the Bombay High Court that a cheque from which the word “bearer” is struck out and there is no substitution of the word “order” is not negotiable within the meaning of the Act, and that the custom of trade which exists in the Bombay market whereby a cheque with the word “bearer” struck out, without the word “order” inserted, is regarded as an order cheque and of a negotiable nature, cannot legally be recognised. The proposed bill was intended to bring the provisions of the Negotiable Instruments Act, 1881, into line with the hitherto existing practice in India. Sir Thomas Holland said that the Government recognised the usefulness of Mr. Patel's suggestions and they readily accepted the Bill.

The Council assembled on March 1. Sir James Meston introduced the **Financial Statement** which will be found dealt with in detail under the heading “Finance” (*q.v.*) and said that the Budget showed a deficit of £4½ millions sterling instead of £ 2½ millions as estimated by Sir William Meyer. This was due to the additional military expenditure accepted last September. Scarcity had cost nearly 1½ million. The military expenditure in the forthcoming year was reckoned at 41 millions; 6½ millions were allotted for railway renewals and 17½ millions for railway capital expenditure, this being a record programme. Ten millions were asked for as a Victory Loan. To enable this allotment, the Excess Profits Tax was expected to give 6 millions and the following year's surplus was likely to be £ 900,000. In concluding his speech the Finance Member referred to the currency position. “We must,” he said, “get our currency habits back on a sounder basis. It is a startling fact that between April, 1915 and the present time, nearly 120 crores of rupees have been added to the circulation. To provide India with this amount, it has been necessary, besides using up the world's current production of silver, to deplete its accumulated stocks. Without the assistance of the Government of the United States we should not have been able to satisfy the appetite of India for metallic currency. To anyone who gives the subject a moment's thought, two conclusions are inevitable. In the first place, the huge sums of money which it has been necessary for India to pay for the purchases of silver bring home to us the wasteful and extravagant nature of what we have been doing. In the second place, a continuance of demand for metallic currency on this scale must react violently on our whole currency and exchange policy. Should the present rates of absorption continue to the end of the year, more than a hundred crores of India's money will have been squandered within three short years. Had it been invested, the interest would have strengthened our revenues and could have been spent to India's benefit.”

Sir William Vincent next presented the report of the Select Committee on the **Criminal Law (Emergency Powers) Bill**. A note of dissent was signed by Messrs. Banerjee, Shastri and Shafi and another by the Nawab Sahib Ali Chowdhuri. Three members of the Committee, namely,

Pandit Madan Mohan Malaviya, Mr. Khaparde and Mr. Patel did not sign the report at all. The Finance member then introduced a Bill providing for the continuance of the Ordinance of 7th December 1918 giving power to increase the maximum limit of the issue of **currency notes** against British Treasury Bills by 14 crores to 80 crores of rupees. He also introduced a Bill for retaining the petrol tax of 6 annas a gallon, and another Bill to allow all those whose incomes were under Rs. 2,000 per annum to be free from income-tax. In the general discussion of the financial statement at the meeting on March 7, Sir Fazulbhoj Currimbhoj welcomed the Railway Programme but alluded to the importance of Irrigation and again emphasised that the excess profits tax would bear heavily on certain industries. Mr. Khaparde suggested that the expenditure on railways be cut down by half and the balance given to sanitation and education. Other speakers also expressed the opinion that greater provision should have been made for education and that the amount to be spent on railways was excessive. Mr. Banerjee congratulated the Government on the reduction of the income tax, but spoke strongly on the subject of military charges in India, urging that more pay be given to Indian troops.

The general discussion on the Budget being concluded, a number of resolutions on specific points were brought forward. Mr. Sarma moved that the Budget allotment providing for a £10 million loan be reduced to 4 millions sterling. He held out poor hopes of the ordinary public supporting a 10 million sterling loan with any enthusiasm. The Finance Member explained that Government were about to bring wealth to India in the shape of railway rolling-stock and if Mr. Sarma's motion were accepted, the country would be unable to pay its lawful debts. He opposed the motion, which was lost. Mr. Sarma next moved that an extra 50 lakhs be allotted to the equipment and improvement of the Health Department and 50 lakhs be added for improving the water supply to rural areas. After some discussion, the Finance Member said that he had to oppose the resolution on technical grounds. If a Member desired increased expenditure, he must show where the money could come from. The matters dealt with in the resolution were within the province of Provincial Governments, but he would be glad to consult with Sir Sankaran Nair with a view to a central investigation into sanitation and the causes of the recent influenza and other epidemics. Upon this explanation, Mr. Sarma withdrew his resolution. Mr. Sarma next moved that 150 more lakhs be given to the extension and improvement of **primary education**. The Finance Member declared that if fit and proper teachers could be obtained at once, he would give the money down. As it was impossible to obtain teachers, the provision for education demanded would be useless. He therefore opposed the resolution, which was put to the meeting and lost. Mr. Chanda moved a resolution that the grant to Assam be increased by a non-recurring grant of 11 lakhs and a recurring grant of 1 lakh for the Morachand College at Sylhet. On the Finance Member explaining that the charges proposed must fall on the provincial revenues, Mr. Chanda withdrew his resolution. Mr. Sarma then moved a resolution

that 50 lakhs be added to the scientific and miscellaneous departments for carrying out the recommendations of the Industrial Commission. Sir Thomas Holland said that he thought it unwise at the moment to make this particular grant and that local governments must be consulted before large sums could be spent in the direction indicated. He gave much information on the subject of forest research and coal and hydro-electric power, and said that Government had not been idle in dealing with the recommendations of the Commission. Mr. Sarma pressed the motion to a division and it was lost.

Sir Claude Hill opened the third stage of the Budget discussion with a speech dealing with the heads "Revenue" and "Public Works Department". He said that although the failure of the monsoon had been widespread, the number of relief works was undoubtedly small when compared with the year 1909. Agricultural schools were being started in several provinces, but development in agriculture was being severely handicapped by the shortage of research officers. He hoped that an inquiry committee would be appointed during the ensuing year. With regard to forestry, the United Provinces and the Punjab had made great strides in the production of revenue, while the Forestry Board at Dehra Dun would shortly consider methods for improving the lac industry, which is worth £ 1½ millions. With regard to irrigation, he mentioned that the productive system had produced 345 lakhs of rupees that year and he hoped for an increase of 16 lakhs in the forthcoming year. He mentioned the appointment of Messrs. Barlow and Mears to examine and make a preliminary survey of the potentialities of India in utilising water-power for the development of industries and said that he hoped for a preliminary report in the following June. He concluded with a reference to the necessity for restricting exports from India. Rai Bahadur B. D. Shukul then moved that "This Council recommends to the Governor-General in Council that the provision for expenditure in agriculture be increased by Rs. 50 lakhs to provide for the extension and improvement of agricultural education." After discussion the resolution was by the leave of the Council withdrawn.

In continuing the third stage of the discussion on the Financial Statement at the sitting on March 10, Sir C. Sankaran Nair pointed out that under the revised Budget estimate for the current year the expenditure on education was nearly 731 lakhs. He gave the figures by which the education grants had been increased during the past two years and said that in five of the major provinces measures permitting adoption of **compulsory education** had either been passed or were on their way to being passed. The Government of Bombay had guaranteed one half of the cost of providing compulsory primary education incurred by the Municipality for this purpose in any given year, and in certain cases even a larger amount might be given. He also gave various figures, regarding sanitary improvements and hoped that much would be done in the matter of sanitary research work during the next year. Rao Bahadur B. N. Sarma moved that the **Railway Budget** programme be reduced by £ 500,000 sterling. The gist of his complaint against the proposed expenditure was that the money was not to be spent on increasing

the total mileage of railways but was solely and wholly to be used to develop opened lines, to add to the existing rolling-stock and to make other improvements. He tried to show that for such additional expenditure there was no justification. Mr. M. N. Hogg in opposing the resolution detailed the tremendous difficulties under which the railways had worked and how necessary the proposed grant was. The proposed sum, far from being excessive, was really inadequate and expenditure would have to be maintained on the present programme level for several years to come. Amongst others who opposed the resolution was Sir Thomas Holland who pointed out that the increase of wagon capacity would only be about 6 to 7 per cent. on the other hand the ton-mileage, that is the amount of goods carried per mile, had increased from 15 thousand millions in 1915 to 21 thousand millions in 1918: that is an increase of 40 per cent. The motion was put and negatived.

Mr. Kamini Kumar Chandra then moved the following resolution. "That this Council recommends to the Governor-General in Council that the surplus of the budget estimate for 1919-1920 be reduced by Rs. 10,000 in order to provide for the appointment of a Committee to inquire into the administration of Delhi Province." He declared that in Delhi an entirely bureaucratic Government had sprung up in a short time in proximity to the Imperial Government and that the Province of Delhi did not enjoy the benefits which people in other Provinces enjoyed. The Province was denied direct representation in the Imperial Legislative Council. The speaker complained that official high-handedness interfered with personal liberty, right of public speech and public action. The Home Member, after replying in detail to Mr. Chanda's allegations, submitted that no case has been made out for an elaborate inquiry into matters of the kind touched upon by Mr. Chanda. The resolution was, by leave of the Council, withdrawn.

Rao Bahadur B. N. Sarma next moved that "This Council recommends to the Governor-General-in-Council that the expenditure under Miscellaneous 32 be increased by (a) Rs. 10,000 to meet the cost of a Committee to recommend the measures needed for organising and developing the banking system of the country; and (b) by Rs. 30,000 towards the cost of a committee to inquire into and report upon the civil expenditure of the country during the last five years and recommend measures for the retrenchment of the annual expenditure." In moving this Resolution Mr. Sarma stated his belief that there was enough capital in this country if only people would use it to run their industries without much extraneous help. If there was to be any industrial advance, however, the habits of the people would have to change considerably. He quoted statistics to show that from £ 200 millions to £ 300 millions worth of gold had been imported into this country and about Rs. 400 crores worth of silver for coinage, etc., whereas in England there was not so much gold or silver as there was in India, although the fluid resources were incomparably superior. Mr. Howard said Government fully recognised the importance of banking development. So far as industrial banking was concerned, it was certain that there must be an inquiry. With regard to Mr. Sarma's

second suggestion, he thought the time inopportune, especially considering that the country was on the eve of great reforms. The resolution was put to the Council in two parts, both parts being lost. It was then put as a whole resolution to the Council which rejected it by 31 votes to 9.

At the sitting on March 12 His Excellency the Commander-in-Chief moved for leave to introduce a Bill to extend the operations of the **Indian Defence Force Act, 1917**, for six months so as to make it operative for 12 months after the war. He said that it was intended to make the training as easy as possible and gave details of the reduction in the hours of training proposed. The attendance in camps, he said, would be optional. The Finance Member next moved that three bills be considered and passed. The first was the Bill to amend the **Indian Paper Currency Act, 1917**. The second was the Bill to retain the **Tax on Petrol** of 6 annas per gallon and the third was the **Income Tax Amendment Bill** to relieve taxation under Rs. 2,000. All these Bills were passed without any comment.

The Council then proceeded to deal with the **Criminal Law (Emergency Powers) Bill**. In connection with this there were no less than 185 amendments on the agenda paper. The Home Member moved that the report of the Select Committee on the Bill be taken into consideration. He said that considerable amendments had been made in the Bill and he would gladly have made more had it been possible. This measure was very important and Government would have been glad if all members had been able to support it. He repudiated the notion that there had been any compact of any kind between Government and individual members of the Council. Government were sincerely convinced that the Bill was necessary and there was no idea of its delaying the Reform Scheme. The Bill was designed purely to safeguard the interests of India from criminal movements which, though affecting a very small proportion of the population, had done much to discredit the loyalty of the great body of the citizens in the past. The Bill could only come into operations in special circumstances and special areas, and could only be employed against criminals who were a menace to the whole State. He concluded "If there are members in this Council who accept the necessity for this measure and accept the facts that I have stated, if they are satisfied that Government has really gone as far as is possible to meet them in modifying the provisions of the Bill, I ask them in all earnestness to pause before they oppose a measure which is framed in our judgment in the best interests of this great country whose welfare we all have at heart." Mr. Surendranath Banerjee then moved the following amendment:—"That the Select Committee's Report, together with the Bill and connected papers, be referred to Local Governments, High Courts and public bodies for criticism." He declared that public opinion still desired Government to pause and consider this Bill further and he earnestly pleaded for more time. He said he was sure there would be a political agitation of the most serious kind if the Bill were passed and cited the example of the agitation which followed upon the partition of Bengal. Khan Bahadur Mian Mahomed Shafi

supported Mr. Banerjea's amendment and Mr. Kamini Kumar Chandra and Mr. G. S. Khaparde pointed out that amendments in their names were to the same effect as that which Mr. Banerjea had moved and expressed the desire that they should be considered together. A number of other speakers strongly supported Mr. Banerjea. Mr. Fagan said that at first sight more consideration might appear reasonable, but he did not think that any speaker had paid sufficient attention to the enormous importance of the advice of the Rowlatt Commission "What," he asked, "was to be gained by further discussion." He opposed the motion for delay. After the Home Member had spoken at length emphasising the urgent need for the measure, the amendment was put to the Council and was defeated by 36 votes to 25.

Thereafter the Finance Member laid the report of the Select Committee on the **Excess Profits Tax** before the Council. The members then started to move amendments to the various clauses of the **Rowlatt Bills**. The chief amendment moved on this day was that by Mr. V. J. Patel, who moved "that to the motion for taking the report of the Select Committee into consideration the following words be added this day 1921." The Home Member pointed out that the effect of the amendment would be to postpone all consideration of the Bill for two years. The motion was put to the Council and was lost by 37 votes to 10. Mr. G. S. Khaparde then moved his amendment "that the Bill be not taken into consideration until the Governor-General in Council receives from Parliament an express authority by an Act of Parliament to pass it." This amendment was also lost. On the following day His Excellency the Viceroy explained to the Council the procedure he intended to adopt with regard to the Bill. The Bill, he said, would be considered clause by clause and when the amendments, if any, in respect of the clauses, had been disposed of, the question would be put that that clause or that clause as amended, as the case might be, stood part of the Bill. Kamini Kumar Chandra moved the following amendment that after sub-clause (2) of clause 1 the following sub-clause be inserted: "(2a) This act shall not come into force till six months will have elapsed after the formation of new Legislative Councils in accordance with the Reform Scheme; provided, however, that if anarchical and revolutionary crimes become prevalent in any part of British India before that, the Governor-General may, with the consent of the Legislative Council make a declaration to that effect in the *Gazette of India* and introduce any provisions of this Act or, if necessary, the whole Act in such part." The Home Member pointed out that this amendment would postpone the operation of the Bill indefinitely, since they did not know when the Reforms would come into operation. The motion was put and negatived. Three members then proposed that "one year" be substituted for the "three years" as the period for which the Bill should be in force but the Home Member again opposed and clause 1 of the Bill was passed. With regard to clause 2, Rao Bahadur B. N. Sarma moved that the following definition be inserted: "Revolutionary movement means a movement directed to the overthrow by force of

His Majesty's established Government in India." After a lengthy discussion Mr. Sarma's amendment was thrown out and clause 2 of the Bill as amended by the Select Committee was passed.

Mr. V. J. Patel then moved that the whole of Part I of the Bill be deleted. The object of this part, he said, was to secure speedy trial of certain offences and said that the procedure proposed in Part I defeated the object aimed at. Other speakers supporting Mr. Patel's motion touched a large number of technical points. The motion was put and negatived. Clause 3 of the Bill was then considered Mr. G. S. Khaparde moved that for the words "In Council" the words "in Legislative Council" be substituted. Rao Bahadur B. N. Sarma also moved the following provisions: "Provided that no action shall be taken by the Governor-General in Council without giving the Indian Legislative Council, or the Legislative Council of the Province in respect of which such a notification is proposed to be made, an opportunity of expressing its opinion by a resolution passed on the subject; provided, further, that such notification shall at any time after the expiry of one year from the date thereof be withdrawn on the recommendation of the Indian Legislative Council or the Legislative Council of the province in respect of which it may have been made by a resolution passed by three-fifths of the members of either of the said Councils." The Home Member opposed both the amendments pointing out that the effect of each was to enable the Legislature to interfere with the Executive. All the amendments were thrown out and clause 3 was passed. Clause 4 was then considered. Seven amendments to this clause were moved. Of these Mr. V. J. Patel moved that section 2 of Clause 4 should read as follows: No order under sub-section (1) shall be made in respect of or be deemed to include, any person whose case is under inquiry before a Magistrate or who has been committed under the Code for trial before a high Court or a Court of Session etc."

Mr. Kamini Kumar Chanda moved that to Sub-clause 4 of the clause the following be added: "Calling upon him to show cause within such time as may be fixed by the Chief Justice why the trial should not be held in accordance with this part. The Chief Justice may, if he thinks proper, extend such time on the application of the accused." The effect of this amendment, he contended, would be to give the accused an opportunity of being fully heard before a final order should be passed against him. The Home Member pointed out that the amendment would defeat the great object of the Bill, which was to secure expeditious trial. The same member also moved that a new sub-clause be inserted in the following terms: "The Chief Justice may direct that the accused, if in custody or under arrest, be produced before him and, when he is produced before him, or without directing that he be produced, order that he be admitted to bail". These three amendments and the other four were all put to the meeting and all were negatived and clause 4 was passed. Amongst the amendments moved to Clause 5 was one by Rao Bahadur B. N. Sarma the effect of which was that in the constitution of the special courts only permanent judges should be nominated. The amendment was put and negatived and clause 5 was passed.

In the discussion of Clause 6, a number of amendments were introduced the effect of which was that it should be necessary for the Advocate General to state his reasons for having given a certificate that, in his opinion, it would be necessary in the interests of justice that the whole, or a part, of the trial should be held at some place other than the usual place of sitting of the High Court. The Law Member pointed out that the clause in the Bill as drafted only provided that the Advocate General could not be compelled to state the grounds of his application in ordinary cases. He would probably be able to state them, and would be most anxious to do so, but he pointed out special cases in which it would be quite impossible for the Advocate General to disclose the grounds for which he was granting a certificate. A motion on the lines of the amendment was put and lost. Clause 6 was then passed. Clause 7 was passed without discussion. Mr. Kamini Kumar Chanda moved the following amendment to Clause 8: "Provided that the accused shall have the right of cross-examining any prosecution witness if he so wishes before the framing of a charge, without prejudice to his right of cross-examination after the framing of the charge". The mover contended that such a preliminary examination as he advocated might demonstrate to the Court that there was really no reason to proceed further in the matter and would hence result in the saving of time and public money. The Home Member pointed out that the proviso was unnecessary, since the practice of the High Court procedure has always been such as the mover suggested should be adopted. The motion was accordingly put and negatived and clause 8 of the Bill was passed.

There were one or two amendments to Clause 9 the effect of which was to compel the Court to adjourn if it should be necessary to enable the accused to get his witnesses produced. The Home Member again pointed out that such amendments were unnecessary, because it was impossible to cite any case in which a judge of a High Court had refused reasonable opportunity for adjournment for the purpose of calling defence witnesses. The amendment was negatived. A further amendment was moved by Mr. Kamini Kumar Chanda as follows: "The accused shall be entitled to get copies of **depositions and exhibits** free of cost to prepare defences". The Home Member refused to admit any reason why an accused, while on trial before a special tribunal of three High Court judges should be more favoured in the way of obtaining copies free of cost than any ordinary person. The provisions of the Code in this respect were not illiberal. The motion was negatived. Mr. Chanda further moved "that after clause 9 the following clause be inserted: (9a) If there is any record of any previous statement or evidence or substance thereof with any authority including the police the accused shall be entitled to have copies of such evidence, statement or substance after applying for the same." The Home Member pointed out that such an amendment was unnecessary, as provision for the supply of such statements as Mr. Chanda indicated already existed. The motion was negatived and clause 9 of the Bill was put and agreed to. Clause 10 passed without discussion. An amendment was moved to Clause 11 by Mr.

Chanda, the effect of which was that, if it was thought necessary to keep any portion of the proceedings of the Court from the public, the opinion of the High Court in this connection should be unanimous. The Home Member saw no reason why, if the Court should decide to hold proceedings *in camera*, the opinion of the majority on the point should not prevail. The motion was negatived. Clause 11 was passed. Mr. Surrendranath Banerjee then moved that Clause 12 be deleted. The contention of all those who spoke in favour of the amendment was that the cross-examination of the accused in the witness-box might tend to prejudice his case, because it had been found that many innocent persons spoil their case, inasmuch as, though they told the truth, they told it in such a way as to strengthen the case against them. The motion was put and was lost by 37 votes to 14. Mr. Kamini Kumar Chanda moved the following amendment: "that for sub-clause 3 to Clause 12 the following sub-clause be substituted: (3) No inference adverse to the accused shall be drawn from his failure to give evidence on oath." As there were several amendments to the same effect, the motion that the principle of the amendment be accepted was put and agreed to. The motion by Rao Bahadur B. N. Sarma to the effect that an accused person when he is in the witness-box should not be asked certain questions, including whether he had a bad character, was negatived after an explanation by the Law Member that there was no object in it. Clause 12 of the Bill as further amended was then passed. Clause 13 passed without discussion.

With regard to Clause 14, Rai Bahadur B. D. Shukul moved the following amendment "that for clause 14 the following clause be substituted: 'The accused shall be acquitted unless all the judges constituting the Court concur in convicting him.' " The motion was put and lost by 35 votes to 15. Mr. V. J. Patel moved that clause 14 should be so amended as to read "In the event of any difference of opinion between the members of the court, the opinion of the majority shall prevail; but in no case of difference of opinion shall a sentence of death be passed." The Home Member said that he was prepared to accept the following amendment "Provided that a sentence of death shall not be passed in any case in which there is a difference of opinion among the members of the Court as to the guilt of the accused," the difference between this amendment and that of Mr. Patel being that the former was to go in under clause 16 instead of clause 14. Clause 14 was then passed. Mr. Patel then moved the following amendment to Clause 15: "Provided that the Court shall not convict the accused of any offence referred to in Clause (2) of the Schedule or of any attempt or conspiracy to commit any such offence or of any abetment of any such offence unless it is proved to its satisfaction that such offence, attempt, conspiracy or abetment is connected with a particular movement endangering the safety of the State." The amendment was defeated by 35 to 15. After discussion Sir James DuBoulay moved that for Clause 15 of the Bill the following be substituted: "At any trial under this Part, the accused may be charged with and convicted of any offence against any provision of the law which is referred to in the Schedule." This amendment was

accepted and Clause 15 passed. Clause 16, with the addition of the proviso already mentioned, was put to the meeting and passed. Among the amendments moved to clause 17 was one by Rao Bahadur B. N. Sarma to the following effect, that to Clause 17 the following be added: "Provided that, where the decision of the Court is that of a majority of the Judges presiding at the trial, an appeal shall lie to a full Bench consisting of not less than five Judges of the High Court, and where the High Court consists of a smaller number of Judges than five, the appeal shall be transferred to a High Court consisting of five or more judges." The Home Member drew attention to the conditions under which this part of the Act would come into operation which made it expedient to provide for a speedy and final trial of offences. The motion was accordingly negatived and clause 17 passed. Several motions proposing the deletion of one or more sub-clauses of clause 18 were defeated; while an amendment to clause 19 providing that in sub clause 2 of clause 19 for the words "Custody of the accused" the words "and his release on bail" be added was accepted. Clause 18 and Clause 19 as amended were passed.

At the session on March 14, **Part II** was considered. Mr. Patel moved that **Part II** be deleted. In his speech, Mr. Patel said that he and others might reconcile themselves to the provisions of Part I, however drastic they might be; but so far as the provisions of Part II and subsequent parts were concerned, he for one had never been able to reconcile himself to them; nor, did he venture to think, could any Indian who loved his country. The provisions of Part II were, he maintained, wrong in principle, unsound in conception, dangerous in operation and too sweeping and too comprehensive. Among those who supported Mr. Patel were Mr. Kamini Kumar Chanda and Rao Bahadur B. N. Sarma. Sir James DuBoulay pointed out that the Bill was divided into two main divisions embodying two great principles; the one was **punitive** and the other **preventive** and that the former would be ineffectual unless the latter were also accepted. The motion was defeated by 35 votes to 21. Part II was then considered clause by clause. Mr. Patel moved an amendment to clause 20 to the effect that "If the Governor-General in Council is satisfied that anarchical or revolutionary movements which are, in his opinion, likely to lead to the commission of offences against the State, are being extensively promoted in the whole or any part of British India, etc." This amendment limited the offences to 10 or 11, the number prescribed in the Indian Penal Code, those under scheduled offences as mentioned in Clause 20 being more numerous. This amendment as slightly amended by Mr. Kamini Kumar Chanda was put and negatived and clause 20 was passed. An amendment to clause 21 moved by Mr. Kamini Kumar Chanda had as its object, according to Mr. Chanda, the destruction of the machinery by which Government proposed to arm the executive with powers of a judicial officer to punish a man and then call upon an investigating authority to inquire into the matter. At this stage Rao Bahadur B. N. Sarma asked whether there was any chance of Government accepting the principles upon which a number of amendments were passed. The Home Member, in reply,

stated that he was prepared to accept an amendment on the lines of the one proposed by Mr. Shastri which was on the agenda paper. Mr. Chanda's amendment was then put and negatived and Mr. Shastri then formally moved the amendment referred to by the Home Member which was as follows: "That in clause 21 (1) for the words by order in writing containing a declaration to that effect" the following be substituted "Shall place all the materials in its possession relating to his case before a judicial officer not below the rank of a District and Sessions Judge and take his opinion thereon. After considering such opinion, the Local Government, if it is satisfied that such action is necessary, may, by order in writing containing a declaration to the effect that such person is or has been actively concerned in such area in any movement of the nature referred to in section 20." The Home Member said that he was prepared to accept the amendment in a modified form. A number of non-official members moved further amendments to the clause on the ground that the Home Member's alteration of Mr. Chanda's amendment had changed it. All however were negatived and clause 21 was passed. Clause 22 passed without discussion. Clauses 23 and 24 were also passed. There were several amendments to Clause 25. One of them moved by Mr. Kamini Kumar Chanda was as follows: "That in clause 25 (2) the words 'in camera' and the words 'at some stage of the proceedings' be deleted and that the words 'personally or by pleader' be inserted after the words before it. Mr. Chanda contended that an accused person in the circumstances contemplated by the Bill should be permitted to have the assistance of a pleader. An amendment proposed by Mr. Patel read as follows: "That in clause 25, Section 2, for the words 'in camera' the following words be substituted: 'which may be *in camera* if such authority for reasons to be recorded in writing so decides.' Mr. Chanda withdrew his amendment and accepted this in its place. This amendment was accordingly put to the meeting and was lost by 33 votes to 17. Mr. Patel moved as follows: "In Clause 25 (3) for the words 'shall not be bound to observe' the words 'shall be as far as possible' be substituted. The clause would then read as follows: "Subject to the provisions of sub-section (2) the inquiry shall be conducted in such manner as the investigating authority considers best suited to elicit the facts of the case and in making the inquiry such authority shall, as far as possible, follow the rules of the law of evidence." In a speech by Mr. C. A. Kincaid he mentioned the fact that several European countries did not observe in their courts the commonly understood laws of evidence but admitted what is known as "hearsay" evidence. Mr. Patel's amendment was put to the meeting and lost by 34 votes to 16. Several other amendments by other speakers to clause 25 were negatived and clause 25 was passed. To Clause 26 Mr. G. S. Khaparde moved the following amendment: "That in proviso (a) of Clause 26, Section 1, after words 'that authority' the words 'its reasons therefor' be inserted." This amendment, he said, made it necessary for the investigating authority not only to give their conclusions but also to set forth their reasons for their conclusions. The Home Member pointed out that it would involve the exposure

of persons who had given information to Government to the danger of immediate assassination. The amendment was withdrawn. The amendment to clause 26, Section 2, by Rao Bahadur Sarma which made the clause read "No order made under sub-section (1) shall continue in force for more than one year from the date of the order made under section (2)" was accepted and passed. Clause 26 was then passed. Clauses 27 to 31 were quickly passed as the speeches were all short. The Home Member was equally brief in his reply and **Part II** of the Bill was passed. Mr. V. J. Patel then moved that **Part III** of the Bill be deleted. He said that after three days' hard work he realised that Government were not prepared to yield in any part of the Bill. He simply left the amendment to the good sense of the Council. Pandit Madan Mohan Malaviya said that the real reason of the strong opposition to this Bill was that injustice should be prevented. None of them desired crime to go on unpunished. There was no cause for this executive action and he asked Government to be content with their present powers. Sir James DuBoulay opposed the amendment and pointed out that the more lenient measures that were sufficient when the revolutionary movement was only threatening to result in these scheduled offences were no longer sufficient and it was necessary to take the more drastic measures provided in **Part III** Mr. Patel's amendment was defeated on a division of 36 to 19. Four amendments to clause 32 were lost and the clause was passed. An amendment to clause 33 was then moved by Mr. Patel to the following effect: "That in sub-clause of clause 33 (1) for the words "prejudicial to public safety" the words "connected with any anarchical or revolutionary movement" be substituted. This amendment was accepted and clause 33 as amended was passed. Clauses 34, 35 and 36 were quickly passed and clause 37, with an amendment moved by Mr. V. J. Patel to the following effect "That in clause 37, after the words 'with fine' the words 'which may extend to one thousand rupees' be inserted" was also passed. Clauses 39, 40, 41 and 42 were passed quickly. The amendments dealing with **Scheduled Offences** were then brought forward. One by Mr. Patel to the following effect: "That for clause (1) of the Schedule the following be substituted 'any offence under the following sections of the Indian Penal Code, namely, Sections 121, 121a 122, 123, 124, 131 and 132'" was accepted. Mr. Patel moved that in Clause 2 (a) of the schedule the figures and letters 124a and 153a be deleted. The inclusion of these figures, he said, would kill all constitutional agitation. The Home Member reassured the Council that suppression of constitutional agitation was far from the mind of the Government. Mr. Patel's amendment was negatived and the motion on the Schedule of the Bill as further amended and as part of the Bill was then put and agreed to. The result of the debate on the Bill was that out of the 185 amendments 19 were accepted in principle or in full and six were accepted partially.

At the meeting on the 18th the Home Member rose to move the Bill to cope with **Anarchical and Revolutionary Crime**. He first drew attention to the alterations in the

Bill which had been carried out after they had been approved by the Council. In the course of his speech, he expressed regret that no support had been given to the Bill. He emphasised that the Government were convinced of the necessity for this legislation, the necessity based on facts established by a thoroughly impartial tribunal. The anarchical movement was far from being killed. It was still very much alive. He made a strong appeal for the co-operation of the members of the Council to crush anarchism, and declared that Government did not, under any circumstance, wish to enforce this bill except in case of necessity. Finally, he said most emphatically that the Bill could not be used against political agitation but only against anarchical and revolutionary crime. Mr. Patel then moved that the Bill be republished and not passed and proceeded to stigmatise the Bill as most unpopular, reiterating many old objections made in the previous debates. In the course of his remarks he said he considered the whole proceedings in connection with the Bill were invalid and illegal. Mr. Banerjee congratulated the Home Member on the conciliatory tone of his speech. He maintained, however, that the measure was unwise and inexpedient and finally implored the Viceroy personally to postpone the measure. Mr. Shastri also delivered a long speech against the Bill. Mr. Hogg in supporting the Bill, said he was satisfied that it was necessary and that no law-abiding citizens would be affected by it. He felt certain that if the Bill were not passed the anarchical party would at once recommence their plots and schemes. The main contention of Pandit Madan Mohan Malaviya's speech was that Government were attaching too much importance to the Rowlatt Commission's recommendations. He pleaded that it was not right for Government to carry the measure against the desire of the representatives of the people. The motion that the Bill be republished was then put and negatived by 35 to 11. At the conclusion of the session, after the Home Member had replied to several arguments advanced in the speech on Mr. Patel's amendment to the Bill, the Bill was passed by 35 votes to 20.

At the session on March 19 the **Termination of the Present War Bill** was passed. His Excellency the Commander-in-Chief then moved that the **Indian Defence Force Amendment Bill** be taken into consideration. Mr. Ironside raised a protest against the scheme on behalf of the commercial community on the ground that the necessity for the measure was no longer felt. The state of efficiency he said, which the Indian Defence Force had attained should suffice to carry on for another year. Several workers in the plains had little time to become soldiers. The Calcutta commercial world was tired out; few men got a trip to the hills; 75 per cent. had joined up in the Army and the rest had carried on business under most difficult circumstances. The Commander-in-Chief said that Government were most sympathetic with Mr. Ironside's remarks and what was now proposed was that all training should be voluntary for men over 41 and they were prepared to order that drills in the hot weather in the plains should be the exception. The Bill was then passed.

Mr. Patel moved that the **Negotiable Instruments Amendment Bill** be taken into consideration and it was passed. The Finance Member next presented the Report of the Select Committee on the **Excess Profits Duty Bill**. He outlined the purpose of the Bill, dealing fully with the details in connection with debts and profits, explaining why certain concessions and alterations had been made in various directions. A Board of referees would deal with all hard cases. Mr. Hogg asked for a definite reassurance from Government that the Bill was meant for one year only and could not be re-enacted without new legislation. Certain banks, insurance companies and others, he said, held large amounts in Government securities which had now largely depreciated. He welcomed the assurance that this depreciation would be taken into consideration. The Super-Tax had been condemned as unsound and uneconomical as applied to companies and it should be removed and applied to individual cases only. He hoped that the Finance Member would promise to put the super-tax and income-tax on a sounder basis next year. Rai Sitanath Rai proposed that the rate of taxation should be 33 per cent. instead of 50 per cent. as in the Bill, and that the taxable limit of small businesses be raised from Rs. 30,000 to Rs. 50,000. The Finance Member pointed out that Government wanted £ 6 millions and only a 50 per cent. assessment would give them this sum. The motion was put and lost. Mr. Hogg then proposed that a refund should be made to all persons if the tax should exceed the sum of Rs. 11 crores. He withdrew it on an assurance from the Finance Member that the latter would apply the principle of Mr. Hogg's motion later on. Several minor amendments, the effect of which was to make the provisions of the Bill clearer, were accepted and the Bill was passed into law.

The Law Member next introduced a Bill to supplement the **Punjab Courts Act, 1918**. He said that the Chief Court in the Province would shortly be replaced by a High Court. The rules of business were suspended and the Bill considered and passed.

The Finance Member presented the Budget in its final form and said that the estimated surplus had been £ 669,000 as against £ 868,000 taken in the financial statement. Provision had been made for a larger outlay to Bombay and the Central Provinces for famine relief. The receipts from Treasury Bills had been very satisfactory in the last three weeks. Provision had been made for reserving £ 33,000 to form the nucleus of a new public health fund.

His Excellency the Viceroy in bringing the March session to a close delivered a speech in which he repudiated the idea that the Rowlatt Bill was a slur on India's good name and repeated that it only affected the smallest fraction of the population. He hoped that its mere existence on the statute book would prove sufficient. Government felt deep regret in being at variance with the views of the non-official Indian members of Council. The Viceroy then asked the members of Council to obliterate the recent disagreement on domestic matters. He then referred to India's whole-hearted response last year to the Empire's

appeal. India now stood on the threshold of a new dispensation and there would be difficulties and disagreements such as were inherent in all processes of political development. He hoped that the spirit of friendship and co-operation which brought them together in the supreme crisis would continue to exercise a healthy influence over public life and concluded by saying "let us part to-day feeling the truth of '*amatium irae amoris reintegratio*.'"

In opening the September session of the Council, the Viceroy dealt with the major events which had occurred in India since the previous meeting of the Council. He said that he had done everything possible in impressing upon the Home Government the views of Moslem fellow-subjects with regard to the **Turkish Peace Terms**. He then referred to the recent grave outbreaks in the **Punjab** and elsewhere and said that the Lieutenant-Governor of the Punjab had been busy reviewing all the sentences and exercising clemency. He announced that a court of inquiry would sit and would consist of Lord Hunter, formerly Solicitor General for Scotland, as Chairman, Mr. Justice Rankin, Mr. W. Rice, General Sir George Barrow, Sir Chimanlal H. Setalvad and Sahibzada Sultan Ahmad Khan. The proceedings of this tribunal would ordinarily be public. An Act, he said, would immediately be passed indemnifying all officers of the Government for the action they had recently taken in restoring order. Alluding to the **Afghan War**, he said he was confident that Afghanistan would realise in time that we had no designs upon her and, if she desired our friendship, overtures must come from her. He defended the work done by medical officers and said that the force on the frontier had been 147,000 men and quoted figures showing hospital admissions. He expressed his warm thanks to the Ruling Princes for their assistance and also his admiration of the splendid work done by Indian units. Indian soldiers for their part in the great war would shortly receive land and money grants. He trusted that the Reform Scheme would shortly emerge from Parliament and said that it would have his loyal support. He hoped that controversy would then cease and all would concentrate their efforts to make it a success. Touching upon the problems of exchange, he declared his sympathy with the commercial community. He realised fully the great handicap of the exchange position to India's foreign trade, but it was impossible to coin rupees, the bullion value of which was greater than their face value. He hoped that the **Exchange Committee** would find a solution of the problem. India, however, was somewhat at the mercy of conditions beyond her control. Turning to the question of **labour in India** the Viceroy said that two representatives from India would proceed to Washington to be present at the International Labour Conference, while Local Governments were being asked for their opinion on the amendments in the law for reducing the hours of labour. The Government of India was strongly protesting against the recent **South African Legislation** as unjustified and begged the people meanwhile to exercise calmness and moderation in the matter, especially as Sir Benjamin Robertson would go

with a deputation to South Africa in India's interests. Government were pressing for the immediate cancellation of the Fiji indentures, but the Bishop of Polynesia, with a non-official mission, was coming to India to try and get India to agree to the resumption of free emigration and he hoped that he would get a patient hearing. Finally, the Viceroy said that he hoped to lay deep and sure the foundations of the new **Industrial development**. Sir Thomas Holland was discussing, he said, the question of the Industrial Commission's Report with the Secretary of State. He hoped to press the subject forward at a good pace and soon see India self-supporting industrially in many directions. Alluding to the Calcutta University Commission's Report, the Viceroy said that the **Dacca University Bill** would be introduced forthwith and that further educational matters would receive close attention in special relation to the country's industrial needs.

Among the replies to interpellations were the following.—The question of the **housing of the working-classes** was engaging the serious attention of Government and Local Governments would shortly be addressed on the subject. The proposal for a **Central Cotton Committee** was under consideration and a scheme for an **Aerial Mail Service** in India was also being considered. The Privy Council had granted leave to appeal to 21 persons convicted by court martial in Lahore. The convicts sentenced to transportation were for the moment retained in Indian jails. Four Courts Martial in the Punjab had tried 114 cases and 852 individuals. Five hundred and eighty males and one female were convicted; 271 acquitted; 108 were sentenced to death; 265 to transportation for life and 183 to imprisonment. 28 death sentences had been commuted and heavy reductions made in cases of imprisonment.

Mr. Shafi asked for leave to introduce the **Sea Customs Amendment Bill**, and leave was granted. The **Provident Fund amendment Bill**, **Indian Census Bill**, **Calcutta High Court Jurisdictional Limit Bill**, the **Indian Naturalisation Amendment Bill** and the **Land Acquisition Amendment Bill** were all introduced. A resolution offering congratulations to His Majesty's naval, military and air forces, etc. on the conclusion of a victorious peace was moved by Rao Bhahadur B. N. Sarma. Mr. Sarma in his speech alluded to the gallantry and endurance displayed by all the forces paying especial tribute to the work done by the fighting forces of India. The motion was passed.

Pandit Madan Mohan Malaviya moved a resolution in the following terms: "That this Council recommends to the Governor-General in Council that he should request His Majesty's Government to appoint without further delay a **commission** consisting of gentlemen not connected with the Indian administration to inquire into (a) the causes of the **recent disturbances in the Punjab** and (b) the propriety of the measures taken in dealing with them and to vest such powers with legal authority to annul or modify sentences passed by the Martial Law Commission

or by Magistrates specially empowered to deal summarily with cases alleged to have been connected with such disturbances." In moving this resolution, Pandit Malaviya argued that, had certain officials managed affairs better, these disturbances would never have taken place. Indian members, he said, had strongly objected to the constitution of the Commission as announced by the Viceroy in his opening speech. He made no attack or reflection on any particular officer, but he strongly urged a larger number of Indians being appointed on the Committee on the ground that Indians were more concerned in the matter than Europeans. The Indian community would have far more confidence if a third Indian were to be appointed. He strongly urged that the Commission should have powers to annul or modify the sentences passed by the Martial Law Commission. Replying, Sir Edward Maclagan said that he thought few people in India had really realised the gravity of the situation caused by the recent disturbances in the Punjab. Had it not been for the rapidity with which the riots had been met, the lives and property of many would have been in imminent danger. As it was, there had very nearly been a very serious catastrophe.

Discussion on this resolution was suspended and during the suspension, the **Indian Coinage Amendment Bill**, the **Cantonments Bill**, the **Cinematograph Amendment Bill**, the **Indian Companies Restriction Repealing Bill**, and the **Indian Merchant Shipping Law Amendment Bill** were all passed.

Subsequently, the Member for Commerce and Industry moved for leave to introduce the **Indian Tariff (Amendment) Bill**, the effect of which, he said, was to impose an export duty of 15 per cent. on hides and skins and a rebate of 10 per cent. on hides and skins exported to other ports of the Empire. Its object was to ensure that Indian hides and skins shall be converted into fully tanned leather for articles of leather as far as possible in India and, failing this, in other parts of India, instead of being exported in a raw state for manufacture in foreign countries. The present position in India, he said, was that there were some hundreds of tanneries for the tanning of hides, a large number of which had come into existence in order to satisfy military requirements during the war. We had, in fact, the foundations of a flourishing industry, but there was reason to fear that it might dwindle and disappear with the termination of military requirements, if some other support were not given. It was proposed to limit by notification the benefit of this rebate to hides and skins actually tanned within the Empire and Indian hides re-exported from an Empire port for the purpose of being tanned abroad would not be entitled to any rebate. After Mr. Crum and Mr. Nigel Paton, Sir Dinshah Wacha and Mr. Sarma had supported the Bill, Pandit Madan Mohan Malaviya said that he did not see the justification for the rebate of 10 per cent. to other parts of the Empire. He advocated that Government should start tanneries and schools and the importation of expert tanners from any country whence they could be obtained. This element of rebate was a dangerous one and he hoped

Government would oppose it. The Bill was then introduced.

The Home Member introduced a Bill further to amend the **Indian Arms Act of 1878**. One of the changes contemplated in the Bill was a curtailment of the number of unlicensed persons and it was probable that a number of persons in lawful possession of arms and ammunitions would be in unlawful possession when a curtailment took place. The present Bill for the safe custody of such arms and ammunitions would give their possessors an opportunity to dispose of their property. Finally, Mr. Shafi introduced a Bill to provide for the establishment and incorporation of a **unitary teaching and residential university** at Dacca. He went fully into the objects and reasons of the university and outlined the provisions made. The march of education in East Bengal had been extraordinary since 1904. Now that the war was over domestic problems could no longer be neglected. He believed that the new university would be heartily welcomed and that it would relieve the burden falling on the Calcutta University. After some criticism on points of detail, the Bill was introduced.

The debate on Pandit Madan Mohan Malaviya's resolution on the appointment of a Commission to inquire into recent **disturbances in the Punjab** was continued. Mr. Kamin Kumar Chanda in supporting the resolution submitted that the best thing would be to add another Indian member to the Committee selected in such a manner as would give satisfaction to the Indian community. Raja Sir Rampal Singh questioned the necessity of declaring the Punjab to be in open rebellion and pressed for the appointment of a greater number of Indians on the Committee. The Home Member replied that he deplored the tendency to minimise the dreadful happenings in the Punjab. He dealt with the remission of sentences. These, he declared, had been reviewed with the greatest care by the Local Governments and, in many cases, by the Government of India. As admitted by many members of the Council, clemency, great clemency, had been shown. He also argued that, since none of those who had spoken to the motion nor the mover himself had anything to say against the personnel of the Committee, there was no reason for changing the whole of the personnel of the Committee: nor as some argued was it a tenable position that the Government of India should divest itself of responsibility in the matter by appointing a Committee which would report direct to His Majesty's Government. Pandit Madan Mohan Malaviya hoped that the Government would consider a suggestion to release on some security or securities personal or pecuniary or both, those men then imprisoned who had not been concerned in arson, murder or pillage, both in order that, pending the result of the inquiry, they should not suffer from unnecessary imprisonment and in order that they should be able to give evidence before the Committee and to see that their cases were properly put before it. The resolution was put to the meeting and negatived.

Mr. Kamini Kumar Chanda next moved the following resolution: "That this council recommends to the Governor-General in Council

the appointment of a mixed committee of officials and non-officials to investigate the causes and nature of the recent outbreak of disorder in Delhi and the circumstances of opening fire on the crowds there. On the Home Member explaining that there would be an inquiry by a committee into these disorders, the resolution was withdrawn. Mr. Chanda then moved that "this council recommends to the Governor-General in Council the appointment of a mixed committee of official and non-official members to investigate into the causes of firing on the crowds in Calcutta in April last." In supporting the resolution Mr. Chanda contended that it was necessary to find out why, if there were riotous assemblies in Calcutta, civil force should not have been resorted to in the first instance. Pandit Madan Mohan Malaviya supported the resolution to the extent that what happened in Calcutta should also be brought within the scope of the Committee or Commission which was to inquire into the events of the Punjab, Delhi and Bombay. The Home Member placed certain reports on the table and declared that in view of these reports there was no real reason either for a separate inquiry or for extending the scope of the inquiry already proposed to the Calcutta disorders. "It is," he said, "obviously desirable to limit the scope of the inquiry as much as possible if the Committee is to finish its work within a reasonable time." The motion was accordingly put and negatived.

At the session on September 15 the Member for Commerce and Industry said Government contemplated a general scheme for an increase in the **pay of postmen** which would absorb the temporary war allowance. He gave figures to show the considerable advances in pay already received by the postmen.

The Commander-in-Chief, replying to various questions, stated that the augmentation of the cadre of the **Indian Medical Service** and applications of temporary Indian officers for permanent commissions were under consideration. Fifty permanent Commissions in the I. M. S. had been granted since the competitive examination ceased, and Indians had received 17 of these.

Mr. Kamini Kumar Chanda then moved the following resolution: "that this Council recommends to the Governor-General-in-Council that Simla should cease to be the summer headquarters of the Punjab Government." He quoted the Government of India to show that it is undesirable for the supreme Government to be at the headquarters of the Provincial Government. Further, the Lieutenant Governor of the Punjab was the only Provincial Governor having a seat on the Imperial Council which gave him opportunities not enjoyed by other rulers. There were, he said, many other reasons for the transfer, but the strongest was that of **accommodation in Simla**. As long ago as 1913 the Government of India recognised that Simla was overcrowded. Since then the number of Government officials had increased enormously and the question of housing became acute. Sir Umar Hayat Khan said that the Government of India had really encroached upon the Punjab, for the Punjab Government were in their own province and lived in a corner

of Simla. He suggested that the Government of India should make use of one of the neighbouring hills. He opposed the resolution. The Home Member deprecated any transfer, saying that to make Simla an Imperial enclave would be very expensive. The cost of the move might be at least 50 lakhs, which would not include railway communications, which might bring the cost up to 124 lakhs. The motion was put and lost.

Mr. Chanda then moved the following resolution: "This Council recommends to the Governor General in Council that immediate steps be taken for the reduction of the unprecedented **high prices** of necessary articles of food and of cloth which obtained in several provinces either by further controlling all exports or facilitating imports or both and by such other means as may be considered proper." He urged that the situation was dangerous and its acuteness was being felt by both Europeans and Indians. He mentioned a suggestion that Burma rice should be freely imported and Government control removed. He said that it was generally understood that stocks were being held up by merchants in Calcutta. Mr. Mant proceeded to show how, owing to the war, there was a **world shortage** of production and this was bound to react on India. Widespread failure of the monsoon in the previous year and the restricted cultivation of rice and other crops had had grave effects on the good position. He quoted figures showing how heavily the exports of grain and rice had been curtailed in the present year. There was really a general shortage of rice throughout the East. Government had refused to export rice to Japan and Java but had done their best for Indians across the seas. Government were also indebted to the Wheat Commission for their assistance in getting wheat from Australia at a reasonable rate. He finished by declaring that the crisis had passed as the monsoon had been good and a plentiful *kharif* harvest was now assured all over India. Mr. Sarma said the question was how did the Government propose to relieve the position in the near future? The inflation of prices was bound to continue owing to the currency position and he argued that wages in India had not increased in the same proportion as prices. About 50 millions of people in India could now only afford one meal a day. Pandit Madan Mohan Malaviya also contended that there was pressing need for action. He believed that the present scarcity was largely due to facilities which had been afforded for exports to other countries. The food produce in India was not enough for the people in this country nor have the poor in India enough money to buy enough food and he quoted Lord Sinha's saying in London that millions in India were on the border of starvation. The resolution was slightly amended and was put to the meeting and accepted. Rai Saheb Sitanath Rai next moved that a **university** be established in **Nagpur** and the resolution was accepted. Mr. Crum next recommended that the **Calcutta Mint** be removed from its present site. The removal of the Mint would effect a much needed improvement from a trade and health point of view. Government accepted the resolution with a proviso that it would not bind itself to immediate

action and the question must be fully gone into *de novo*.

At the meeting on 17th September the Viceroy, before proceeding to the business of the day, invited the Honorary Members' attention to two tablets, one in bronze and the other in marble, which had been prepared for the purpose of recording in villages the number of recruits furnished for the war. He invited criticism on these tablets. Among the answers to questions one was by Sir A. Anderson who said that the restoration of the train service in India to pre-war conditions would be slow, as engines and rolling stock were obtained from home. The Member for Commerce and Industry said that, subject to certain restrictions, trading with enemy countries was now permissible but that the import or export of certain commodities was subject to control. The **Sea Customs Amendment Bill**, the **Provident Fund Amendment Bill**, the **Calcutta High Court Jurisdictional Limit Bill**, the **Indian Naturalisation Amendment Bill** and the **Repealing and Amending Bill** were all passed.

The Member for Commerce and Industry then moved that the **Indian Tariff Amendment Bill** be considered. Rao Bahadur B. N. Sarma moved that the duty be raised from 15 per cent to 20 per cent. Mr. Crum opposed the motion, saying that practically all hide exporters were of opinion that the proposed duty should be reduced. The Member for Commerce and Industry declared that the figure proposed by Government was the fairest that could be taken. The motion was negatived. Mr. Sarma then moved that in column 4 in clause 3 the proviso be omitted, which was tantamount to deleting the clause giving rebate between the various parts of the Empire. Mr. Sarma's speech was frequently interrupted by the Member for Commerce and Industry because he was continually arguing on the general question of imperial preference. No general question of imperial preference, said the Member for Commerce and Industry, was at present suggested. It was, however, in the interests of India that the hides and skins produced in India should be tanned in India if possible or within the British Empire if it is not possible to tan them in India. Mr. Sarma's amendment was put to the vote and lost. Mr. Sarma then moved that only 5 per cent. instead of 10 per cent. rebate be allowed to the Dominions and his motion was again lost. After an appeal by the Member for Commerce and Industry to Mr. Sarma not to move the next amendment on the paper Mr. Sarma moved that in clause 3, column 4 of the proviso the following be added "Provided, further, that no rebate shall be granted to any Dominion, State or territory which discriminated against the Indian tariff policy." The motion was put and negatived.

The Home Member next moved that the **Workmen's Breach of Contract Amendment Bill** be introduced. He explained that the Workmen's Breach of Contracts Act had been found capable of abuse by employers and the amendment he proposed would remedy these and other defects. Magistrates would be given discretion in a certain direction and under the new Act imprisonment other than rigorous

could be ordered for breach of contract. Pandit Madan Mohan Malaviya pressed for the repeal of the Act. After some further discussion the Bill was introduced.

At the meeting on September 18 the Member of Commerce and Industry introduced a Bill to extend the duration of the **Import and Export of Goods 1916** by two years and six months, as it was necessary to retain the powers of control in the interests of India and the Empire for some time to come.

The Viceroy then rose and said that the **Indemnity** Bill was now before the Council. The Home Member, in introducing the Bill, explained that it was to indemnify officers of Government and other persons for *bona fide* acts in the course of martial law during the recent disorders and to provide for the continuance of the sentences passed by the courts established under martial law. Such legislation, he said, was inevitable after a period of martial law. It left the question of facts open to the proposed Committee of Inquiry and there was nothing to prejudice the Committee's findings or the possible action by Government on its report. The Bill did not affect appeals to the Privy Council or relate to punishments or sentences by the Commissions appointed under the Martial Law Ordinance 1919. Payment and compensation for property taken or used under Martial Law was provided for. The Government would appoint two judges, one European and one Indian, to examine and advise on all the sentences imposed by the Martial Law Tribunals. The Government's power to punish its own officials was in no way affected by the Indemnity Act nor was the Committee of Inquiry in any way forestalled. It was the supreme duty of Government to protect their officers if any decisive action and efficient service was to be expected from them. If the Bill were not passed, officers of Government would be liable to suits from any malicious persons. No reasonable man could ask that a man who had done his duty should be left in such a position. Further, if the Government did not validate the retention of the men now in jail, the public safety would be endangered.

Mr. Kamini Kumar Chanda moved an amendment which was as follows: "That the consideration of the motion should stand over till after the submission of the Report of the Committee of Inquiry on the Punjab disturbances." He contended that, in a way, the Indemnity Bill usurped the functions of the Committee of Inquiry. If Government acted on the assumption that what their officers did was right and proper, why appoint a committee at all? He declared that there was no open rebellion in the Punjab, but the people wished to defy Sir Michael O'Dwyer's desire to suppress political agitation in the Province and therefore the Committee of Inquiry should have a free hand and should not be hampered in any way. Sardar Sundar Singh supported the Bill: he was fully assured that no man who had not acted properly would go unpunished. Pandit Madan Mohan Malaviya spoke for nearly four hours. Most of his speech was a bitter attack upon the manner in which the Punjab Government had suppressed the disturbances. He delivered some detailed criticisms of the provisions of the

Bill and read telegrams from Lahore denying Sir Umar Hayat Khan's statement in the Council that the inhabitants of the Punjab did not want a further inquiry. He also read some newspaper extracts condemning the policy of proceeding with the Bill before the Committee submitted its report, and said that truth, honour and justice demanded that Government should allow the Committee of Inquiry's report to be submitted to His Majesty's Government. The whole country would be grateful if this was done. He concluded with an impassioned appeal to postpone the introduction of the Bill. Mr. Thompson, Chief Secretary to the Punjab Government alluded to the Pandit's speech as amazing. He denied that the Punjab Government had prevented any English or other papers from publishing a true statement of the occurrences in the Punjab. He said that he would be able to show that all the cases mentioned by the Pandit were distorted or exaggerated. For instance, the Pandit had said that 530 persons had been killed in Amritsar. Now the Punjab Government had issued proclamations asking all persons to give all possible information on the number killed and the inquiry showed that the number killed was 291. The Pandit's picture of the inconveniences which the prisoners at Amritsar had suffered was grossly overdrawn. Mr. Thompson in reply to the allegations by the Pandit said that the Punjab Government had most carefully inquired into the Ramnagar case and two officials who had made a special inquiry entirely supported Colonel O'Brien who had heard the case. The Punjab Government saw no reason for remitting any sentences in this case. He alluded to the terrible mischief caused by false rumours and gave some details of these reports. For example he referred to the report of the Pandit at Amritsar to the Municipality that there was a corpse in a well, the corpse turning out to be an earthenware pot and a bale of cloth. He could not agree with the statements of the Pandit and Mr. Chanda that the Satyagraha movement had been an innocent one. The Maharaja of Cassim Bazaar doubted whether it was wise to introduce the Bill in face of the opinion of a large moderate body in India. Mr. Crum characterised Mr. Chanda's suggestion that officers must take their chance without any indemnity as hideous and ridiculous.

Mr. Hailey, in supporting the Bill, justified the course taken by the Punjab Government. He pointed out that the Pandit in his speech had omitted all mention of the numerous attempts to cut communications. Alluding to the events in Lahore, he gave a graphic account of the Pandit's so-called peaceful demonstration. He said that there was no possible doubt that the mob was imbued with exactly the same spirit as that which actuated the mob at Amritsar, and he read several extracts from the Commissioner's report which formed a crushing reply to several of the Pandit's statements. He also read translations, of startling proclamations inciting the Sikhs, Hindus and Mahomedans to enlist in the *Danda Shik* army. When the Government decided on martial law the riots at Amritsar had displayed a very strong racial feeling while communications, save by wireless had been

cut off. Portraits of the King had been destroyed and inflammatory leaflets were distributed. "It was no fortuitous collection of schoolboys," said Mr. Hailey, "that cut the communications between Gujranwalla and Lahore or looted Rs. 8 lakhs worth of property from the Railway."

Mr. Sachidananda Sinha declared that the introduction of martial law really meant the suspension of law. He contended that almost every shade of public opinion was unanimous that Government should not press the Bill at the present moment. Mr. MacPherson denied that the Indian public was boiling over with indignation at the measures taken in the Punjab. There was a large and sound body of people, for example, in Bihar and Orissa who were grateful to Government for the action taken in the Punjab. After General Sir H. Hudson had delivered a justification of the declaration of Martial Law, Rao Bahadur B. N. Sarma advanced much the same objections to the Bill as other speakers. The Law Member after expressing keen sorrow at the loss of life both European and Indian said that he feared innocent people had been killed while the real instigators of the trouble had escaped scotfree. He said that in every country martial law stepped in when necessary and replaced civil law. The question before the Council was whether a state of affairs had arisen in the Punjab with which the Civilians could not deal. According to all reliable evidence, such a state of affairs had existed. No man in the Punjab said that there was no rebellion in the Punjab. He quoted Mr. Horniman and Mrs. Besant as authorities that there was rebellion in the Punjab. The policy of modern times was that an indemnity act should invariably follow martial law and the necessity for such an act should be obvious. He concluded by laying special stress on the fact that an appeal to the Privy Council was open in all cases. Sir Dinshah E. Wacha said that the Law Member's explanation had convinced him and that he would support the Bill.

Mr. Chanda's amendment that the Bill be postponed was then put to the Council and was rejected.

The motion that the Bill be introduced was then put and agreed to.

At the meeting of September 23 Rao Bahadur B. N. Sarma moved the following resolution "This Council recommends to the Governor-General in Council that a **State Bank** on the lines suggested by Professor Keynes in his annexure to the Report on the Indian Currency be established in India at a very early date." Speaking on behalf of this resolution, Mr. Sarma said that his justification for it was the example of almost every European State. They in India had considered the desirability of establishing a central bank on the lines indicated by the Government of India in 1901. He believed that it was advisable to relieve Government of its present heavy responsibilities and secure the advantages arising from a centralised control of the banking system. It had been suggested, he said, that the Presidency Banks should be amalgamated under one control. But he thought that such large sums as were involved could not be entrusted

to amalgamated banks. The State control of banks should be very stringent and such control would be to the advantage of the people of India. The Raja of Cassimbazaar supported the resolution and also Pandit Madan Mohan Malaviya, who pointed out that Indian banking was in a very backward condition and that the enormous industrial and commercial interests which had grown up in India required sound banking facilities. The Finance Member said that Government supported many of the remarks made by those who had spoken in favour of the resolution. It was, he said, a matter of urgency that the people of India should be encouraged to overcome their hoarding habits. He was not, however, altogether in favour of the immediate establishment of a State Bank. The Presidency Banks had carried on when the Government had their hands full and after the armistice the amalgamation of the Banks was suggested and the opening of a number of branches had been promised. At present the main object was to push forward the work in hand under present arrangements and, when the latter had somewhat developed, the establishment of an Imperial Bank in India could be given consideration to. Mr. Sarma's resolution was put and negatived.

Mr. Crum then moved a resolution: "That the Council should recommend the **electrification of the suburban railways** within 25 miles of Calcutta and improvement generally of the local passenger transport and travelling facilities. By the electrification of suburban railways much quicker train service would be possible. Great numbers of clerks and others were compelled to live outside Calcutta owing to the lack of accommodation in the city itself. As it was, owing to the bad train service, very many people had to catch a train before eight o'clock in the morning in order to get to their offices in time. The Member for Commerce and Industry said that Government had no hesitation in accepting the resolution. He declared that he hoped to discuss the matter further with the officials concerned when he visited Calcutta in the cold weather. The resolution was accordingly adopted. Mr. Sachidananda Sinha then moved the following resolution. "That this Council recommends to the Governor-General in Council that he may be pleased to make a representation to the Secretary of State for India (or, if not, to His Majesty's Government) that an Indian Member chosen from the non-official Indian members of the Council be appointed to the **Indian Army Commission** recently constituted." He said that, as there had been an impression in India for many years that the expenses of the Indian Army had been much greater than the finances of India could stand, it was necessary that a public man be appointed to the Committee to give his advice to the military members. General Bingley announced that Government had anticipated the objection to the Resolution and had appointed Major Sir Umar Hayat Khan to the Commission. He also mentioned that the other members of the Committee would be President Viscount Esher; Members, Sir Michael O'Dwyer; Lieut.-General Sir H. V. Cox; Lieutenant-General Sir W. C. Jacob; Lieut. General Sir H. Hudson; Lieut. General Sir J. P. Du Cane; Sir G. Fell,

Major General Sir W. Gillman; and Secretary, Brigadier General C. M. Wagstaff. Pandit Madan Mohan Malaviya declared that he was disappointed in the statement made by General Bingley. He did not desire to say anything discourteous against Sir Umer Hayat Khan but he did not think that the selection would be welcomed by the Indian people. The questions to be decided greatly affected the life of the people of India as a whole. Although he greatly respected military men, he did not think the latter were capable of judging of things which had so intimate a connection with the life of the people. The time for adjournment arrived while the Pandit was still speaking and he was asked to resume his seat.

At the meeting on September 24 the Law Member presented the Report of the Select Committee on the Bill further to amend the **Provincial Insolvency Act, 1907**, the Bill to amend the **Indian Arms Act, 1878**, the **Indian Coinage Act, 1906**, the **Cantonments Act, 1910**, the **Cinematograph Act, 1918**, the **Indian Merchant Shipping Act, 1859 and 1883**, and the Bill to remove the restrictions imposed on the withdrawal of capital from the money market by Companies. They were all passed without discussion.

The Finance Member then moved for leave to introduce a Bill further to amend the **Indian Paper Currency (Amendment) Act, 1917**, and also that His Excellency should suspend the rules of business, and admit the Bill to be taken into consideration. In introducing the Bill (for details, *vide* The Laws of 1919) Mr. Howard said that the amount of Treasury Bills outstanding amounted to 50 crores and advances to the amount of 13 crores had been obtained from the Presidency Banks. As for other measures which would meet the present difficulty, Mr. Howard said that these were firstly the sales of new Treasury Bills, secondly further ways and means advances from the Presidency Banks, thirdly, remittances of gold and silver by the Secretary of State. The first, he said, only postponed the evil day. As for the second, it was improbable that banks could let Government have any more funds, and it was indeed very likely that they would have to ask for the return of previous advances. In regard to the third, all members knew the stringent position as regards silver, and as far as gold was concerned, the present Bill provided that the issue of notes was to be backed by gold coming from the United States. The reason for the present urgency of the measure was that Government had deferred the introduction of the Bill to the last possible moment owing to the undesirability of such a financial measure. Rao Bahadur B. N. Sarma opposed the Bill. He described it as a tinkering measure. The normal channels for the flow of gold and silver must be re-opened, and the issue of more notes must be backed by the British Treasury. The Bill was then taken into consideration and passed.

The debate on the **Indemnity Bill** was then resumed. Pandit Madan Mohan Malaviya moved that the provisions of the Bill should be examined by a select committee as the matter was an extremely important one. The motion was put to the Council and negatived. The Home Member then introduced two amendments,

the first providing the substitution in the preamble of the Bill the words "Martial law has been in force" for it has been necessary for the purpose of maintaining and restoring order to resort to martial law, the second that in the second clause of the preamble the word "certain" be inserted between the words "indemnity" and "officers". The object of the amendments was to remove any objection as to whether martial law was justified or not. Both amendments were passed. The Home Member introduced an amendment that for the words "commencement of this Act" the words "26th August 1919" be substituted. This amendment was adopted. Pandit Madan Mohan Malaviya proposed that for the words "Provided that such officer or person has acted in good faith and in the reasonable belief that his action was necessary" be substituted for the words "Provided always that the indemnity hereby granted is granted upon this supposition and condition and all such acts etc. shall have been done *bona fide* necessarily and properly and without needless severity in furtherance and extension of the objects for which martial law was proclaimed as aforesaid." The amendment was rejected. There were three amendments in the name of Mr. Sarma, Pandit Madan Mohan Malaviya and Mr. Sinha. All the three amendments objected to clause 2 as at present constituted as being unsound law. All the amendments were rejected. Rao Bahadur B. N. Sarma moved that clause 4 be omitted. Among his objections to the clause was the fact that the ordinary right of appeal against sentences pronounced under martial law was taken away and that in some cases the evidence was not clearly recorded while in others there was no clear judgment. The Home Member pointed out that the clause was necessary. He had already announced that two High Court Judges would revise the sentences of the summary courts constituted under martial law and those who had only committed offences against military regulations and not against ordinary law would be released. If the clause were omitted, a number of dangerous criminals would be thrown on the country. The amendment was accordingly rejected. The next amendment was to the effect that the words "in certain cases subject to limitation specified here and below" be added to paragraph 3 of the preamble and was adopted. Pandit Madan Mohan Malaviya then moved that sub-clause (b) be inserted as a new clause 7 and that to the said new clause certain words be added, the object of which was that any order made by His Majesty in Council on any appeal presented by any individual against any conviction or sentence passed by a tribunal constituted under martial law might be taken advantage of by any other person in a similar case. The Home Member refused to accept the amendment, but announced that Government would feel bound to extend any finding of His Majesty in Council with regard to one particular case to similar cases. Replying to an amendment by Mr. Sarma that an addition be made to clause 7 to the effect that the Act should be in force till the Committee appointed by the Governor General in Council to inquire into the recent disorders made its report and for a

period of three months thereafter, the Home Member repeated his statement that the Bill under discussion had nothing whatever to do with the findings of the Commission and Mr. Sarma's motion was rejected.

At the final sitting on September 25, a number of speeches were delivered on the Bill which was put to the Council and passed.

The Viceroy then said that it was usual for the Viceroy to address members both before

and after a session of the Council. In the present circumstances, however, he thought that the Honorary Members would prefer to close the session as soon as possible. Within the last three weeks he had dealt comprehensively with matters of importance and nothing further had transpired since then. It only remained for him to thank the members for their work and wished them godspeed and safe return to their homes.

The Council then adjourned *sine die*.

Bombay Legislative Council.

At the March session of the Bombay Legislative Council H. E. Sir George Lloyd presided for the first time and in his introductory speech he referred to the services of the Navy and the Army and paid a tribute to the achievements of Mahratta soldiers in the fighting line. After referring to the outbreak of influenza and cholera in the Presidency and to the prospect of famine in the near future His Excellency paid a tribute to the officers of Government who had borne the immense strain entailed upon them by the war and who, in spite of a depleted staff, had discharged their duties with courage, ability and loyalty to the interests of the country. He explained his views on social reform and foreshadowed the increasing and permanent interest of Government in education, the improvement of sanitation and the amelioration of the lot of Government officers in the lower grades. He emphasised the need for housing reform and for improvement in the condition of labour in Bombay asking for such measures as Government might take the sympathy and support of the press and the public. The Hon. Mr. G. K. Parekh speaking as the father of the Council thanked His Excellency and assured him of the sympathy and co-operation of the Council.

The Budget estimates for 1919-1920 were introduced by the Hon. Mr. Carmichael. The Budget for 1919-20 opened with a balance of 4,61,26 which, it was anticipated, would be raised to 4,62,98 by the close of the year, the total revenue being estimated at 10,38,27 and the total expenditure at 10,36,55. The estimates thus exhibited a surplus of 1,72. The total revenue showed an advance of 95,19 over the current year's budget and of 57'08 over the revised estimate. The total expenditure showed an increase of 1,33,53 over the current year's budget and of 1,24,66 over the revised estimate. The budget estimates for the ensuing year included 9,80 for expenditure out of unexpended balances of the Imperial grants given for education, sanitation, agriculture and allied objects and medical relief since the year 1911-12. The budget also provided about 47,00 on account of the grant of war allowances or about 40,00 in excess of the charges for grain compensation allowance which would otherwise have to be paid to the low paid establishments. Also provision was made for expenditure in connection with the relief of dis-

tress in consequence of the present agricultural situation. Direct expenditure on famine relief was estimated at 50,00 for 1918-19 and 45,00 for 1919-20, one-fourth of which was a charge on Provincial Revenues, the rest being borne by Imperial.

The Hon. Major Fernandes obtained leave to introduce a Bill for the **prevention of juvenile smoking**, the operative part of which provided against any person selling to a person under the age of 18 any tobacco under penalty of a fine on a first conviction not exceeding Rs. 20 and Rs. 100 in the case of the second and subsequent convictions. The Bill further authorised a police officer to seize tobacco in the possession of any person under the age of 18. This Bill came up for the first reading at the September session and at the end of a lengthy debate was withdrawn, the Government attitude on the subject being neutral.

A motion introduced by the Hon. Mr. Parekh recommended that the **supply of fodder** to the people should not be restricted to the requirements of plough and milch cattle but should be large enough to meet the need of cattle of all ages. This was opposed by the Hon. Mr. Purshotamdas Thakurdas on the ground that it was not within the scope of practical politics, and the Hon. Mr. Carmichael opposed it on behalf of Government. The motion was lost on being put to the vote.

The Hon. Sardar Syed Ali El Edroos moved a resolution recommending that the **Koran** should be taught during school hours in all Municipal Urdu schools where the Compulsory Education Act may be in force, provided that the expenses of such teaching are borne by the local Muslim Community. The Hon. Mr. Bhurgri was for amending the motion so as to read that the Koran should be taught outside school hours. After a number of speakers had spoken, Sir Ibrahim Rahimtulla deprecated the advocacy of a measure which would still further handicap the Muslim pupils in the race for education, as compared with non-Muslim pupils. Muslim pupils were now compelled to study Urdu in addition to one of the local vernaculars before they could study English. The effect of passing this resolution would be to compel him to undergo instruction in the Koran during school hours. Speaking

(Figures in thousands of rupees.)

as a Mussulman, he said this was not in the interests of Mussalmans themselves. On behalf of Government, he could accept neither the original motion nor the amendment.

The Hon. Dewan Bahadur K. R. Godbole moved that the Government of Bombay be recommended to move the Government of India to revise the **feeder railway terms** of 1913 and 1914 to suit the present financial conditions in India, so as to induce private capital to come in freely for the starting of the feeder railways that were required for the development of the Presidency. After several speakers had supported the motion it was withdrawn at the request of the Hon. Mr. Carmichael, who said that Government were awaiting the decision of the Government of India in this matter.

The Hon. Mr. Strangman next moved that early steps be taken towards the erection of a new court-house for the **Court of the Judicial Commissioner of Sind** and for the equipment of the existing Court with an adequate and competent staff. He described the existing Court house as obsolete and insanitary, and lacking in modern conveniences, and the staff, which was paid on a lower level than the corresponding Courts of Oudh and the Central Provinces as inefficient and overworked. The motion was strongly supported by members from Sind and was accepted on behalf of Government after it had been explained that the financial provision made in 1914 for this purpose could not be utilised owing to the war. The budget for the coming official year contained provisions for it.

At the July meeting of the Council the Hon. Mr. G. K. Parekh moved a resolution with regard to the signing of the **Peace Treaty** expressing the profound thankfulness of the Council and tendering its congratulations to Great Britain and her Allies. His Excellency, in putting the resolution to the Council, said the whole Empire including India had emerged secure from the struggle with unstained honour. The termination of the war would bring new responsibilities to India and it was the task of his Government and the members of the Council to guide India's national aspirations and enthusiasm for the awakening of which the British people were responsible, but he asked them to remember that national development was perfected by steady advance rather than by forced marches.

After the Budget Debate the Bill further to amend the Bombay Port Trust Act, the Bill further to amend the Bombay Local Boards Act and the Government Occupants (Sind) Act were carried through the three stages without discussion. The Bill to amend the Bombay City Tobacco Act was read a first time and referred to a Select Committee.

Among the resolutions was one by the Hon. Mr. Paranjpye recommending Government to issue instructions to Commissioners and Collectors asking them to include among the nominated members of the various local boards and municipalities suitable men from the **depressed classes** whenever such men were available. The Government accepted this resolution with a modification that the officers in question should give effect to this recommendation "as far as possible," and thus modified, the resolution was carried. Another resolution was moved by the Hon. Mr. Belvi

who asked the Government to make it compulsory on all Municipalities and local bodies in the Presidency to throw open the existing wells and dharamshalas owned by them to members of the untouchable classes or to maintain separate wells and dharamshalas for their use. The Council was divided on the question. The champions of the depressed classes urged that since the latter contributed to the revenues of the local bodies they were entitled to the use of the works constructed from the general funds. Against this, it was urged that, if the resolution was put into effect, it would hurt the religious susceptibilities of the people of the higher classes and would widen the gulf between the two classes of the people. The Government view, which was put forward by the Hon. Sir Ibrahim Rahimtulla, was that this was a matter which came within the province of the local bodies themselves, and the Government had no legal power to compel municipalities and local boards to act in the manner suggested in the resolution. The Government, therefore, did not propose to take any decided line on the question, but left it to the Council to decide it themselves. On being put to the vote, both the resolution and an amendment were lost.

At the September session of the Council His Excellency the Governor made a pronouncement on the **housing problem** in Bombay City, in which he said that he had hoped to arrive at some concrete proposals for the solution of this problem within six months of his arrival. But the attention of Government had been occupied by disturbances and agitations during the early part of the year to the detriment of all other business. Government had extended the period of the Rent Act in Bombay not as a substitute for housing operations but as a necessary palliative to those who needed it for another two years during the time the Government plans were being matured and schemes undertaken. The demand for accommodation was confined not only to the labouring classes but almost to every other class, whether Indian or European. They must provide at least fifty thousand one-room tenements for the labouring classes in as short a time as possible. Government as an authority were going to do something but they counted on other local authorities such as the Port Trust, Railways and others.

A resolution by the Hon. Mr. Purshotamdas Thakurdas urging Government to accelerate the pace of construction of **irrigation works** in the Presidency led to a lengthy debate. H. E. the Governor assured the Council that it was merely a question of finance and said that Government did not subscribe to the point of view put forward by some members that these irrigation works should be looked at from the percentage of profit they gave. Government looked at the matter from the point of view of the immense indirect good they did to the owners of land. Mr. Thakurdas pressed for a division which resulted in the resolution being carried by 22 votes against 17. Another resolution from the same honourable member asking the Government to offer further inducements to cultivators to sink wells was also discussed at some length, but in view of the official explanation that the data regarding the number of wells in the Presidency were not yet ready, he obtained permission to postpone it.

Madras Legislative Council.

H. E. Lord Willingdon reconstituted the Council in July and in doing so he has, in a certain degree, anticipated the Montagu-Chelmsford reforms by the nomination to the Council of a number of Indians to represent the minorities who would otherwise remain unrepresented and by increasing the non-official majority.

The first meeting of the Legislative Council was held in February. The avowed object of this session was the consideration of the amended draft financial statement. But it happened that by far the most important legislative business of the year was accomplished at this session. The Hon'ble Mr. B. V. Narasimha Ayyar brought in a motion for the adjournment of the house for 24 hours on the ground that certain paragraphs which appeared in the Administration Report of the Presidency betrayed an attitude antagonistic to popular aspirations, that the Government were creating the impression that they were taking sides with the capitalists in the economic struggle of the labourers. He adduced, as an additional reason for the motion that it was widely believed that the circular which was then under circulation among the members of the Indian Civil Service was engineered by the Government and that the Government should openly dissociate themselves from both these allegations. H. E. the Governor, however, disallowed the motion. The Hon'ble Member stated that the ruling had not the support of any provision of law or statutory rule and protested against the ruling by leaving the Council Chamber for a few hours. The Hon'ble Sir Alexander Cardew then presented the draft Financial Statement, the discussions on which extended for over three days. On the succeeding four days the consideration of the Madras City Municipal Bill and the Madras Agricultural Pests and Diseases Bill was the chief business. The **Madras City Municipal Bill** was by far the most important piece of legislation that the Council had before it during the administration of Lord Pentland and no less than four and a half days at this session and nearly two days at the March session were devoted to the consideration of its various clauses. No less than 130 amendments were proposed to the various sections of the Bill. They related, among other things, to the securing of the panel system of appointing its chief executive officer, powers for fixing the salary that should be paid to the higher officers, the representation of the Muhammadans and other minorities, the prevention of persons interested in contracts with the Corporation from becoming members of the Corporation Council and for securing additional powers for the imposition of new taxes. The amendments were given full consideration by the Government and such of them as were not opposed to the principles underlying the proposed legislation, were accepted by the Government. The Bill in the form in which it was finally accepted by the Council gave effect to the recommendations of the Decentralisation Commission in regard to the control of the Local Government of the City Municipal Corporation. It conferred on the Council full control over

taxation and the budget subject only to certain statutory limitations and full powers in regard to the staff, the right of the Local Government to exercise a veto in the case of certain high officials being now reserved. It transferred many powers from the Local Government to the Council and from the Council or the Standing Committee to the Standing Committee or the Commissioner. It also increased the borrowing powers of the Corporation and authorised it to raise new taxes. The changes introduced in the constitution of the Corporation and in the mechanism of its working will have the effect of popularising the administration and associating a much wider circle of people in the task. The motion for the City Municipal Bill being passed into law had, however, to be deferred to the meeting held in March as the sanction of the Government of India had to be obtained on certain details. An interesting scene occurred when the motion that the Bill be passed into law was brought in. The Hon'ble Mr. B. V. Narasimha Ayyar, in opposing it, began to read his speech in Tamil. The President of the Council (Lord Pentland) pointed out that though the matter was not provided for by the rules he would advise the gentleman to adopt the usual practice. Mr. Narasimha Ayyar, however, declined to do so and asked for a ruling prohibiting a speech in Tamil. The President had to rule him out of order as it was contrary to the traditional practice of the house.

The **Madras Agricultural Pests and Diseases Bill** was then taken into consideration. The few amendments proposed to the clauses of the Bill related to matters of detail. They were mostly accepted by the Government. The non-official members, in giving their support to this Government measure, recognised that it was a piece of beneficent legislation intended for the welfare of the agriculturists in this part of the country. The Bill was passed into law on the 13th February, 1919.

Of the resolutions on matters of general public interest moved at the March meeting, the one on which attention was keenly centred was that brought forward by the Hon'ble Mr. B. V. Narasimha Ayyar that a committee of officials and non-officials be appointed to enquire into the grievances of the public regarding the distribution or supply of kerosine oil, paddy and other **necessaries of life**. Allied to this resolution were those brought forward by the Hon'ble Mr. K. Rama Ayyangar for the allotment of funds to relieve distress caused by the high prices of food-stuffs and by the Hon'ble Mr. B. Venkatapathi Raju asking for the issue of instructions to the Director of Civil Supplies to remove the inter-district restrictions on the transport of food-stuffs. Nearly all the members of the Council took part in the debate. The Hon'ble Sir A. Cardew, on behalf of the Government, explained that the Government were alive to the seriousness and gravity of the situation. While they sympathised with the hard lot of the people created by the high prices which were unparalleled in history, even in the worst famines, they were of opinion that the restrictions on transport were necessary.

The resolution recommending that steps be taken to initiate legislation for checking the growth of **juvenile smoking** was next considered. The Government were not satisfied that on the information before them legislation on the subject could be undertaken. The mover withdrew it on the assurance given by the Government that they will communicate the discussions on the resolution to the local bodies for their opinions and invite also the opinions of other Local Governments. The next resolution related to the proposal that certain of the recommendations of the Government of India made in their resolution on Local Self-Government for the non-officialisation of local bodies should be given effect to immediately. The Hon'ble Mr. P. Rajagopalachariar, on behalf of the Government, promised that the suggestion would be considered in connection with the District Municipalities and Local Boards' Bills which were then under revision. The resolution was thereupon withdrawn. A resolution suggesting that the Government of India should be approached for a lump grant for the development of industries in this Presidency was also withdrawn when the Government pointed out that under the existing financial relations, the proposal was unacceptable.

At the April meeting, the Hon'ble Mr. Todhunter presented the Budget for 1919-20. A Bill to amend the Madras Outports Fees Act was then introduced and referred to a select committee.

The Council newly constituted by H. E. Lord Willingdon met on the 13th August.

A motion to amend the rules of debate so that English might be the sole medium of debate in Council was brought forward by the Hon'ble the Advocate-General, seconded and approved. The report of the select committee on the Outports Landing and Shipping Fees Bill was then presented; the Bill and the report were then taken into consideration and the motion that the Bill be passed into law was carried. A Bill to amend the Madras Civil Courts Act was also passed into law without reference to a select committee. A Bill to amend the Madras Forest Act, which was purely of a non-contentious nature and which was entirely a sequel to the recent appointment of a Chief Conservator of Forests who took the place of the Board of Revenue in regard to forest administration, was then brought forward

and it was passed into law. The non-official members then elected the Finance Committee for the coming year.

At the November session the **interpellations** numbered 320 and there were 35 resolutions. Lord Willingdon took the occasion to exhort the interpellators to have some consideration for the overworked Secretariat and to use their powers of interpellation only in regard to matters of real public interest, and suggested that the Publicity Board and the Editor's Table may be freely used to obtain the information they wanted. He also advised them to take the District Officers more into their confidence as most of the matters interpellated upon were within their knowledge.

Of the legislative measures the **Village Courts Bill**, though a small measure, was of great importance for rural India. The Bill was passed into law and vests full and autonomous powers in the hands of villagers to deal with the civil and criminal litigation, the former up to Rs. 50 and the latter confined to petty cases of theft and mischief arising in the village. These courts are to be panchayet courts, the members of which will be wholly elected by the villagers, the members, in turn, electing their President. These courts will practically have exclusive jurisdiction of village litigation. It is hoped that this measure will tend to check the volume of wasteful litigation characteristic of South Indian villages in recent years. The **District Municipalities Bill** was a comprehensive measure introduced to revise and bring up-to-date the law relating to these bodies which are springing into existence in ever increasing numbers in the Presidency. As in the case of the City Municipal Act, the measure is intended to vest larger powers in the municipal bodies, increase their elective element and develop their resources with a view to enabling them to provide for social amenities of the communities better and more efficiently. Non-official members sought to have the measure postponed till after the Reforms had been introduced, as they were of opinion that the Bill could be further enlarged and made a better instrument of popular and progressive reform in urban areas in the districts. This, however, was strongly resisted by the Government and by a section of non-officials who felt that to postpone it would be to throw away an amount of labour and thought bestowed on the Bill, which, even its opponents admitted, was a great improvement on the present Act.

Bengal Legislative Council.

From the legislative point of view the year was an outstanding one, for not only was the cold weather session of the Bengal Legislative Council the most fruitful for several years in measures actually passed, but two acts passed marked a new stage in legislative practice in the Province. These were the Juvenile Smoking Act and the Bengal Primary Education Act, the first private member's bills to be passed in the Bengal Council. Dr. Suhrawardy was the author of the former and Babu Surendra Nath Roy of the latter. When Mr. Roy

introduced his Bill the whole question of primary education was under the consideration of the Government, and the Bill, when it had been amended by the Select Committee, fitted in so well with the views of the Government as to the best method of proceeding with the extension of primary education that they accepted Mr. Roy's measure which, it is hoped, will mean a large measure in advance.

The Bengal Tenancy Bill, a measure to amend the Tenancy Act in various formal and minor details, was passed at the first meeting

of the year on January 21, while the most important measure to become law was the **Village Self-Government Act**, introduced by Lord Sinha in April of the previous year, and not actually passed until the last meeting of the cold weather session on April 14th. The object of this Act is to establish elective village committees to administer village affairs and exercise restricted judicial powers. This measure proved to be very controversial, and when it emerged from the Select Committee there were so many amendments to it that a motion was carried to re-commit it to the Committee. It came to the Council again at the April meeting, and even then did not satisfy the non-official members, for the amendments of which notice had been given numbered 221. Their disposal took the greater part of two days, and 79 were lost, 62 withdrawn, 62 fell through, being consequential, and 12 were accepted. This Bill was piloted through the Council by Sir Henry Wheeler, in the absence through illness of the Maharaja of Burdwan.

On February 18, after the Village Self-government Bill had been sent back to the Committee, Rai Mahendra Chandra Mitter moved that Government take steps to standardise **prices of foodstuffs and cloth**. Sir Henry Wheeler admitted that prices were high and that the poor were suffering, but said they could not bring forward such a remedy for a matter which was not provincial but a question for all India, nay of all the world. He pointed out the difficulties with which any system of control was beset, and said he did not think it wise to disturb normal trade conditions or upset the market, though they were watching the situation carefully and should action appear necessary they would take it. The resolution was defeated.

During the **Budget debate**, which extended over three days, a number of interesting resolutions were moved.

Mr. Phelps proposed that two lakhs be provided for improving the medical services in the hospitals in Calcutta, but, on Sir Henry Wheeler assuring him that there was no intention on the part of Government of reducing expenditure on Calcutta hospitals during the year, the honorary member withdrew his motion.

Rai Radha Churn Pal moved that five lakhs be provided for the extension of primary education in Calcutta, the amount to be met by corresponding reductions in the provision made for building nurses' quarters at the Medical College Hospital, and in the grant-in-aid for education. Sir Frank Carter and Sir Rajendra Mookerjee opposed the motion, which found no support even from non-official members and was lost.

In addition to the measures already referred to, the Calcutta Hackney Carriage Bill, transferring the control of gharries in the city from the Corporation to the Police, was passed into law.

When the Council assembled for the month soon sitting in Calcutta on July 3, the Maharaja of Burdwan moved the withdrawal of the **Calcutta Municipal Bill** (which had been before the Council and the Select Committee

for nearly two years) on the ground, mainly that the Corporation itself did not want the organisation proposed to be set up under the Bill. He said that the Corporation had changed its mind, and now protested against some of the things they formerly asked for. The motion was carried.

The **Food Adulteration Bill** was passed at the same meeting, and a Bill to further amend the Calcutta Police Act, 1866, and the Calcutta Suburban Police Act, 1866, designed to strengthen the hands of the Commissioner of Police and to improve the discipline of the force, was referred to a Select Committee.

Sir Frank Carter moved for a commission of inquiry into the **leper problem** and legislation required in connection with it, and advocated the establishment of a leper colony in some hill station or semi-hill station, where they could be comfortably housed and could work for their keep. The present leper asylum at Gobra, which was quite inadequate for its purpose, could then be used as an observation camp, where suspected cases could be watched.

Sir Henry Wheeler said the present leper population of Bengal was about 17,000 out of total population of 45 millions, and there were three asylums—at Gobra, Bankura, and Rancegunge. He said what was needed was a whole-India inquiry, and that he was quite willing to bring the question to the notice of the Government of India.

On this promise the resolution was withdrawn.

Four resolutions on the subject of high prices were moved at this meeting, and, in reply, Mr. Cumming gave a resume of what the Government had done. They had, he said, tried to use the food available for the greatest good of the greatest number. Steps had been taken to control the price of Burma rice, but it was practically impossible to regulate the supply of Bengal rice. There was, too, a difficulty in that the people would not take Burma rice if they could possibly get Bengal. Three of the resolutions urging the Government to take steps to increase supplies and to reduce prices were accepted.

At the September meeting, on the motion of Mr. W. H. Phelps, a Committee was appointed to consider the whole question of the causes of excessive land values and high rents in Calcutta, and, if possible, to suggest remedies.

The Maharaja of Burdwan, while sympathising with the resolution, feared that it would not provide an immediate remedy for the excessive rents which had been referred to. If the control had had good effects in Bombay, however, there would be good cause for an investigation in Calcutta, and he therefore, on behalf of the Government, accepted the motion, which was then carried unanimously.

At the next meeting, on November 19, a resolution advocating that the Government approach the Government of India for a grant of fifty lakhs of rupees, or such sum as they thought necessary, for the relief of sufferers through the Eastern Bengal Cyclone, was carried; while at the last meeting of the year on December 18, the Cruelty to Animals Bill was adopted.

The United Provinces Legislative Council.

The United Provinces Legislative Council met at Allahabad on 24th January, Sir Harcourt Butler presiding. Among the **resolutions** was one by Mr. Chintamani requiring the development of industries should be a provincial subject with full liberty of action to the Local Government and Government of India officers should stand in the relation of advisers to the Local Government. Mr. Chatterjee said the question was under discussion between the Government of India and the Local Government and he was not in a position to express any opinion now. Mr. Chintamani also moved that the Government of India should allow the Local Government to draw upon its accumulated balance to the needed extent for expenditure non-recurring or recurring in the coming financial year. Mr. Sim said the Hon'ble member was simply proposing that Local Governments should budget for bankruptcies. As regards the first part, Government had no objection to make provision for non-recurring expenditure in the coming financial year. The first part of the resolution was carried and the second lost. Mr. Chintamani also moved that the Lieutenant-Governor should abrogate the rule requiring Deputy Collectors to call on Superintendents of Police. Mr. O'Donnell replied it must be left entirely to the good feeling of officers themselves to decide whether they will adhere to the practice or not. It was not a matter for determination by official order. The resolution was withdrawn. Mr. Shahid Hosain moved a resolution of congratulation to Lord Sinha on his elevation to the peerage. His Honour said he wished to associate himself and his Government and his officers with the resolution whole-heartedly.

The Council met at Lucknow on 4th March when Mr. Sim presented the **Financial Statement**. The Budget estimates for the financial year 1919-20 provide for an income of Rs. 8,11,03,000 and an expenditure of Rs. 8,53,56,000. The estimated income is Rs. 83,14,000 in excess of the original and Rs. 43,99,000 in excess of the revised estimate for the current year, while the estimated expenditure exceeds the original budget figures of 1918-19 by Rs. 1,34,24,000 and the revised by Rs. 99,94,000. Of the increases anticipated land revenue is responsible for Rs. 33,37,000. This is due to the large suspensions in the year 1918-19, the recurring increase being small. New settlements account for an increase of Rs. 9,32,000 under the main head of shared revenue, the provincial share of which is Rs. 3,50,000. Although the year will open with heavy arrears, it is anticipated that, owing to the continuance of unfavourable agricultural prospects, remissions and suspensions during the year will amount to nearly a crore. The heavy fall in the income from stamps is, it is thought, of a temporary nature, and the estimates provide for an increase of three lakhs compared with the revised estimate of 1918-19, the provincial share of which is Rs. 1,50,000. A large increase of Rs. 25,37,000 is anticipated under excise. This is due to the intention of the Local Govern-

ment to impose drastic enhancements of excise duties with effect from the next financial year.

At the meeting of the Council on 13th March there was a spirited debate on the proposed publication of a journal on educational lines by the Government, Saiyid Raza Ali maintaining that it was almost impossible for Government to run a paper on non-controversial lines. Pandit Gokhran Nath Misra supported this view, while Mr. Chintamani and Pandit Tara Datt Gairola declared that the experience of the "War Journal" had shown that there was room for a publication of the kind contemplated by Government. The United Provinces Public Gambling (Amendment) Bill, the United Provinces Municipalities (Amendment) Bill and the United Provinces Primary Education Bill were passed.

The discussion of the Budget took place on 7th April. Among the speakers were Pandit Gokaran Nath Misra, Mr. Chintamani, Mr. Crawshaw, the Maharaj-Kumar of Benares, the Maharaja of Balrampur and Sheikh Shahid Hosain. All the speakers offered their congratulations to Mr. Sim, the Financial Secretary, on the excellence of the Budget, especially dealing with the expenditure on education. Mr. Sim thanked his non-official colleagues for the able assistance he had received from the Finance Committee. The Government accepted a resolution moved by Mr. Chintamani recommending the early consideration of the subject of minute subdivision of agricultural holdings and the taking of such steps to remedy the evil as may be found practicable.

At the meeting of the Council at Naini Tal on 2nd June Mr. Lambert, who introduced the **Town Improvement Bill, 1919**, mentioned that advisory committees had for some time been at work examining improvement schemes for Lucknow, Allahabad and Cawnpore and the reports from Lucknow and Cawnpore were now ready. In both cities schemes of far-reaching importance had been considered and the benefits which they were designed to confer should be realised as soon as possible. Since the end of April they had been entitled to assume the assent of the Secretary of State to the introduction of the measure and Government was anxious that no further time should be lost in pressing on this important piece of legislation.

At the meeting of the Council at Naini Tal on 22nd September, Mr. Lambert moved that the U. P. Town planning Bill be taken into consideration and passed. Munshi Narayan Prasad Asthana moved certain changes, but these were rejected by the Government. Several other minor amendments proposed by Hon'ble members were lost. The Bill was passed and His Honour congratulated the Council, the committees concerned and Mr. Lambert, on the passing of the Bill. Munshi Narayan Prasad Asthana subsequently moved another amendment to the Bill providing for appeals to the High Court from awards given under the Act. This was accepted by Govern-

ment, subject to restrictions. Lalla Sukhbir Singh moved a resolution providing for the increase of the rate collection allowed to zemindars on account of the water rate. This was accepted in a modified form.

A resolution to increase the tax on motor cars was lost, another regarding an increase of pay

to the armed police was withdrawn on his Honour explaining that the matter was under consideration. Syed Raza Ali's resolution about the shoe removal question was not supported by his non-official colleagues and was lost by an overwhelming majority.

Punjab Legislative Council.

In the first half of the year 1919 five meetings of the Punjab Legislative Council were held at Government House, Lahore, with the last of which the Presidentship of Sir Michael O'Dwyer came to an honourable close. One meeting was held in the second half of the year.

At the opening meeting, on February 6 and 7, four important Bills were passed by the Council. Of these the **Punjab Courts Act** (Amendment) Bill was based on the conversion of the Chief Court into a High Court and was of a non-contentious nature. The **District Boards Act** (Amendment) Bill, also passed, provided for the inclusion of registration of marriages among the other objects for which fees may be charged and aimed at placing marriage registration on a more definite and permanent basis and at legalising the existing system where it was in force without modifying it. The **Punjab Custom** (Power to Contest) Bill, which proposed to enact restrictions on the power to contest an alienation of immoveable property or the appointment of an heir by descendants or collaterals on the ground that it was contrary to custom, was also circulated for opinion. The Bill owed its origin to a conference at Simla on Punjab customary law and aimed at giving effect to some of the recommendations of that conference. The **Adulteration of Food** Bill which aimed at securing the sale of food in a pure and genuine condition and for prevention of adulteration was passed unanimously. Finally the **Punjab Compulsory Education** Bill, to which a full day's sitting was devoted was passed into law under the new title of "The Primary Education Act," the Hon. Mr. Richey, Director of Public Instruction, being heartily congratulated on the successful enactment of a very urgent measure. Speaking on the Bill Sir Michael O'Dwyer said that it might not be the last and final form of legislation on the subject but it was the most responsible measure undertaken during his term of office. Its success would depend on the co-operation of the public, especially the rural classes. Among the resolutions brought before the Council one, moved by R. B. Bakshi Bhan Lal, recommending that in future not less than three-fourths of the educational expenditure of local bodies should be met from provincial revenues was lost, and another by the same mover, making a similar proposal in the matter of sanitary expenditure, was withdrawn.

The amended draft of the **Punjab Financial Statement** was presented by the Hon. Mr. O. F. Lumsden, Finance Member, at a meeting of the Legislative Council held on March 7. The opening balance was Rs. 2,23,35,000; the revenue Rs. 5,88,50,000; the expenditure, Rs. 6,02,28,000; and the closing balance Rs. 2,09,57,000. The statement dwells on the fact that the year did not pass without financial anxieties, owing to failure of the rains, high prices of food grains, provision of a special war allowance to Government servants, etc.; and provincial balances escaped being indented on only by unexpected and substantial betterments under certain land revenue heads and a large surplus under excise. The presentation of the budget was marked this year by a change of procedure. There had been objections to the old rules and under the new system the Financial statement would be in the hands of the Council a full week for consideration and for amendment by means of resolutions as well as for discussion while the facts were fresh in the minds of members. Another feature of the financial position was that while the war had hindered progress in many directions in the past it was possible in the present year to make up leeway, especially in education, industries and public works. The discussion on the budget took place on March 13 and was chiefly notable for a rebuke administered by the President to certain non-officials for the irresponsible manner in which allegations had been made against the excise policy of Government, without a proper knowledge of the facts and figures on record. Sir Michael O'Dwyer, however, added that Government welcomed well considered advice in the matter as this problem was receiving their close attention. Under the Reform Scheme he said non-official members would probably have a great increase of power and responsibility and the chief direction in which this would be employed was the region of finance. His Honour thought that on the whole the Council had done fairly well in this first experiment and he congratulated the Finance Member on the manner in which he had run the gauntlet of non-official criticism. Of three resolutions on the Budget moved by the Hon. K. B. Fazli-Hussain, two were negatived and one was withdrawn, the discussion of the one proposing an increase under the head of educational expenditure occupying the best part of the meeting held on March 14.

There was a full meeting of the Council on April 7 when cordial tributes were paid to **Sir Michael O'Dwyer**, the retiring Lieut. Governor and the Budget after final discussion was passed. His Honour replied in a dignified and impressive farewell speech dwelling at some length on the success of the measures Government had taken to secure public order in the Province. He emphasised—and his words were justified in a very few days by the tragic events which have left a mark on the province—that Government would not hesitate to use all means at its disposal to check any recurrence of disorder. **Sir Michael O'Dwyer** also made an important statement on constitutional reforms and spoke with justifiable pride on the Punjab's record in the war.

Only one short meeting of the Council was held in the remaining portion of the year on November 10, when **Sir Edward Maclagan** made his maiden speech as President of the Council. His opening speech was brief and unpretentious and made only a passing reference to the disturb-

ances of April which he said had not come within the cognisance of the Council. After paying a tribute to the late Mr. G. W. Parker, a valued non-official European member who died on November 2, **Sir Edward Maclagan** went on to survey the prospects of industrial advancement in the Punjab as the result of the impetus given to manufactures by the war. At the conclusion of his speech four of the unofficial Indian members delivered brief speeches welcoming the new Lieutenant Governor. The only legislation, however, was concerned with two technical measures on the subject of customary law. The Punjab Custom (Power to Contest) Bill introduced on February 6 was referred to a select committee. The Hon. Mr. E. A. Joseph, Revenue Secretary, also introduced the Punjab Limitation (Custom) Bill, the object of which was to amend and consolidate the law governing the limitation of suits relating to alienation of ancestral immoveable property and appointments of heirs by persons following agricultural customs in the Punjab. This Bill was referred to a select committee and the Council adjourned.

Burma Legislative Council.

The first meeting of the year was held on March 13, 1919. The Hon'ble Mr. Webb introduced the **Burma Habitual Offenders' Restriction Bill**, a measure similar to that passed in the Punjab in 1918. The object of the Bill is to enable the authorities to restrict the movements of habitual criminals to any prescribed area and to require them to report themselves if that is deemed necessary. It was referred to a select committee.

The Hon'ble Mr. Keith presented the Revised **Financial Statement**. He showed that the provincial receipts for the year ending March 31, 1918, had proved four lakhs better than the estimate, and the year closed with a balance of Rs. 95 lakhs, or three lakhs more than was anticipated. The revised estimates for the year 1919-20 were then examined. The original budget provided for receipts Rs. 645 lakhs, expenditure Rs. 615 lakhs. Receipts in the revised estimate were placed at Rs. 655 lakhs, expenditure was unchanged. Thus the balance for the year was Rs. 40 lakhs and the total provincial balance Rs. 135 lakhs. The receipts were swelled by two grants from Imperial Revenues, four lakhs for an Agricultural College at Mandalay, and eleven lakhs towards the cost of the Military Police Operations in the Chin Hills, which involved an increased expenditure of 15 lakhs over the original estimate. If these items are excluded, it is seen that the revenue was five lakhs less than the estimates and the expenditure eleven lakhs less. Land revenue suffered to the extent of 15 lakhs from a shortage in the rice crop, and heavy remissions of capitation tax were allowed in Arakan, where the lack of shipping prevented cultivators from exporting their

rice. On the other hand revenue from forests was five lakhs better than the estimates and income tax increased by seven lakhs. The saving of eleven lakhs on the expenditure side was due to the depletion by the war of the Public Works Staff, which rendered it impossible to carry out projects planned and funded.

The Budget estimates for 1919-20 provide for an increase of Rs. 639 lakhs and an expenditure of nearly Rs. 676 lakhs, of which Rs. 36½ lakhs are to be appropriated from the balance of Rs. 135 lakhs at the end of the previous year. The provincial balance will thus be reduced to Rs. 98½ lakhs, of which only sixty lakhs are available for general purposes. The remainder is specifically reserved for various objects under the orders of the Government of India. The estimated receipts are sixteen lakhs below the revised estimate of receipts in the previous year; but these were swollen by the collection of some seventy lakhs of arrears of land revenue instead of the normal five to ten lakhs. Compared with the last year before the war there is an increase in revenue of seventy-two lakhs, divided between Land Revenue, Forests, Excise, and Imperial assignments. On the expenditure side the allotment for public works rises from 82½ to 131½ lakhs, the largest ever made in the history of the province. Half of this sum is for original works. New roads will absorb thirty-eight lakhs, and six lakhs will be contributed to local funds for the same purpose. Expenditure on forest increases by Rs. 9½ lakhs, but there is a saving of over ten lakhs on police.

The second meeting took place on April 17. The Hon. Dr. Parakh asked questions with regard to the employment of Burmese women and

girls as cheroot rollers in the Federated Malay States, concerning which alarm and suspicion had been displayed in the Rangoon press. The Hon. Mr. Webb's reply showed that there was no ground whatever for the suspicion that girls were being sent to Penang for immoral purposes. Under Burmese rule the emigration of Burmese women was entirely forbidden.

The Hon. Mr. Webb presented the Report of the Select Committee on the Burma Habitual Offenders' Restriction Bill and recommended that the Bill be passed as amended.

The Hon. Mr. Keith presented the Civil Budget Estimates for 1919-20 which he had explained at the previous meeting. No alteration in the Revised Financial Statement had been made by the Government of India, and with the exception of minor changes in the allotment of funds for Irrigation and Civil Works, the figures and explanations submitted at the meeting on March 13th still held good.

The Hon. Mr. Du Bern moved that Government should appoint a Committee to select a site and approve of plans for a **contagious Diseases Hospital** in Rangoon and provide funds for it in the ensuing year. He was supported by three other members. In reply the Hon. Mr. Tonkinson expounded the policy of Government in the matter. He showed that under an arrangement made in 1902 Government, in exchange for a surrender of excise receipts, took over from the Municipality the existing hospitals in Rangoon, but made it quite clear that this arrangement implied no responsibility for hospitals or dispensaries to be opened thereafter. The annual receipts of the Municipality were diminished by two lakhs, while Government incurred responsibility for an annual outlay of Rs. 1,83,000. Government, however, accepted responsibility for the building of the new General Hospital at a cost of nearly thirty-three lakhs, and the annual charges in connection with this hospital alone, met entirely from provincial funds, are now Rs. 4,20,000. The Municipality has thus made a good bargain. Government now suggested that the Municipality should recognise its responsibilities and proposed to retransfer the existing Contagious Diseases Hospital, sanctioning an annual payment to the Municipality equivalent to the charges incurred in the past on this and on the Municipal Plague Hospital, together with a contribution towards new buildings. The Resolution was therefore modified and carried in the following form: "That a Committee be appointed by the Local Government to select a site and submit plans for a Contagious Diseases Hospital in the City of Rangoon; and that the provision of funds be forthwith discussed by the Local Government with the Rangoon Municipal Committee."

At the third meeting on the 19th of April the Habitual Offenders' Restriction Bill was passed.

In the general discussion of the Budget the Hon. Mr. Goodliffe urged that some portion of the provincial balance should be utilised for the construction of a Contagious Diseases Hospital and for carrying out the recommendations of the Stock-breeding Committee. The Hon. Mr. Lim Chin Tsong referred to the high degree of criminality in the province as shown in successive Administrative Reports and suggested

measures for its reduction. On the assumption that crime would be found on investigation to be most frequent in the interval between harvest and the next year's sowing, he recommended employment of villagers in the construction of roads and the re-afforestation of tracts cleared of timber to be used for fuel. The Hon. Maung Po Tha criticised the Government's control of rice, recommended the extension to Lower Burma of the authority of the Thathanabaing, or Archbishop of Upper Burma, and the provision of water hydrants free of water tax in the numerous monasteries of Rangoon. The Hon. Maung Nyun pressed for legislation conferring on Buddhists the power of making wills, the extension of popular control in municipalities and further restrictions on the traffic in liquor and drugs. The Hon. Mr. Holberton sympathised with the difficulties of the Revenue Secretary in choosing amongst the various objects that clamoured for financial aid those most deserving of assistance with the limited funds available. He criticised rice control, urged a revision of the Provincial Settlement which should give relief to Burma, by the transference, for example, of the cost of the Military Police, an essentially military force, to the Imperial Exchequer and the retention by Burma of the capitation tax. He recommended larger representation for the European commercial community on the Provincial Council under the Reform Scheme and larger representation for the province on the Imperial Council. In a brief speech commenting on the reduction of educational expenditure in the Budget the Hon. Mr. Jamal made the astonishing statement that Burma was less educated than any other part of India. The Hon. Sir Sao Maung was absent but his speech was read by the officiating Secretary to the Council. He advocated the early completion of the Southern Shan States railway.

The Hon. Mr. Webb in reply to some of the previous speakers pointed out that action with regard to the Thathanabaing must be initiated by the Buddhists themselves. He assured Mr. Holberton that the representation of Burma on the Imperial Council under the Reform Scheme was receiving the attention of the Local Government.

The Hon. Mr. Tonkinson pointed out that before Government could decide to remove questions of succession and inheritance from the purview of Buddhist law there must be some assurance of unanimity on the part of the Buddhist community. The establishment of popular control in municipalities was being considered and the necessary measures would be taken as speedily as possible. The free supply of water to Buddhist monasteries was a matter which might very reasonably receive the attention of the supporters of those institutions who should pay the water-rate.

The Hon. Mr. Keith defended Government's policy with regard to rice, pointing out that if Burma had been left outside the control she might very easily have found herself without shipping to move her rice and so have lost her market altogether. He reminded the Council that the proposals with regard to Capitation tax and the Military police formed part of a scheme for financial readjustment already submitted to the Government of India. He explained and

defended the policy of Government with regard to liquor and drugs : he criticised the thesis of the Hon. Mr. Lim Chin Tsong that lack of employment in the cold season was a main source of crime and showed the prohibitive cost of the suggested remedy.

His Honour the President in his closing speech described the efforts made by Burma during the war to assist the Empire with money and men. He corrected certain misapprehensions which had become evident on the question of the Government's policy in the matter of rice control. The large sums of money which were required to carry out a comprehensive plan of road-making would, he hoped, be made available by the proposed revision of the Provincial Settlement. The scheme for an Agricultural College would shortly be put into operation, the organisation of a Department of Industries had been taken in hand, and tanning, paper manufacture, pine tapping for turpentine and other industries depending on the forests were being encouraged. The University scheme, including Draft Bill, First Statutes and First Regulations, was now before the Government, while primary education had been stimulated by the creation of two new Inspectors' circles and the appointment of thirty new sub-inspectors. An investigation into the causes of crime was proceeding, the reorganisation of the Provincial and Subordinate Civil Services had been taken up and proposals for local self-government were nearing fruition. His Honour then reviewed the course of the discussion and controversies that had proceeded in the press on the tentative scheme of Reforms

for Burma and removed a number of misapprehensions. He criticised the demand for immediate control over public affairs as ignoring the whole principle of his scheme which was a scheme of training in all branches of public work, local and provincial. His Honour closed his speech with a reference to the disturbances in India from which Burma had been fortunately free, justified the Rowlatt Acts and severely censured the action taken by Mr. Gandhi.

The fourth meeting was held on the 21st of August. The Burma Town Amendment Bill, to confer on towns powers to make rules for the suppression or prevention of cattle disease and to make rules regulating pawnshops, was introduced by the Hon. Mr. Webb and referred to a select committee.

The Hon. Mr. Webb then introduced the **Rangoon Development Trust Bill**. The Bill provides for the creation of a Trust to take over the work of reclamation, schemes for Rangoon under the Burma Town Planning Bill, the management of the Government Estate in Rangoon and the administration of the Town Lands Reclamation funds. The Rangoon Municipality, which is relieved of considerable responsibilities, will contribute one lakh per annum, and additional revenue will be raised by a tax on passengers leaving Rangoon by sea, contributions from owners of property improved, and a stamp duty on instruments of sale or gift of immoveable property in Rangoon. The Bill was referred to a Select Committee and the Council then adjourned *sine die*.

Constitutional Reform.

On August 20th, 1917, the Right Hon'ble E. S. Montagu, His Majesty's Secretary of State for India, made the following announcement in the House of Commons:—

"The policy of His Majesty's Government, with which the Government of India are in complete accord, is that of the increasing association of Indians in every branch of the Administration, and the gradual development of self-governing institutions with a view to the progressive realisation of responsible government in India as an integral part of the British Empire. They have decided that substantial steps in this direction shall be taken as soon as possible and that it is of the highest importance as a preliminary to considering what these steps should be, that there should be a free and informal exchange of opinion between those in authority at home and in India. His Majesty's Government have accordingly decided, with

His Majesty's approval, that I should accept the Viceroy's invitation to proceed to India to discuss these matters with the Viceroy and the Government of India, to consider with the Viceroy the views of local Governments, and to receive with him the suggestions of representative bodies and others. I would add that progress in this policy can only be achieved by successive stages. The British Government and the Government of India on whom the responsibility lies for the welfare and advancement of the Indian peoples, must be judges of the time and measure of each advance, and they must be guided by the co-operation received from those upon whom new opportunities of service will thus be conferred, and by the extent to which it is found that confidence can be reposed in their sense of responsibility. Ample opportunity will be afforded for public discussion of the proposals, which will be submitted in due course to Parliament."

THE MONTAGU-CHELMSFORD REPORT.

In accordance with the policy outlined in that statement, Mr. Montagu visited India in the cold weather of 1917-18 and in July of the latter year there was published the Report on Indian Constitutional Reforms which had been signed by the Secretary of State and the Viceroy on 22nd April. The proposals set forth in that report are really the application to practical conditions of four general propositions. For the sake of clearness, these propositions may be set out thus—

I.—There should be, as far as possible, complete popular control in local bodies, and the largest possible independence for them of outside control.

II.—The provinces are the domain in which the earliest steps towards the progressive realisation of responsible Government should be taken. Some measure of responsibility should be given at once, and our aim is to give complete responsibility as soon as conditions admit. This involves at once giving the provinces the largest measure of independence, legislative, administrative and financial, of the Government of India which is compatible with the due discharge by the latter of its own responsibilities.

III.—The Government of India must remain wholly responsible to Parliament, and saving such responsibility its authority in essential matters must remain indisputable, pending experience of the effect of the changes now to be introduced in the provinces. In the meantime the Indian Legislative Council should be enlarged, and made more representative, and its opportunities of influencing Government increased.

IV.—In proportion as the foregoing changes take effect, the control of Parliament and the Secretary of State over the Government of India and Provincial Government must be relaxed.

What has been done by the proposals may be summarised in the words of those who drew them up.

What we have done is to afford Indians a fair share in the Government of the entire country, while providing in the provinces the means for them to attain the stage of responsible government, to which the beginning of responsibility for the Government of India itself must be the sequel.

The Proposals.

Local self-government does not really fall within the scope of these proposals at all, since the aim of Government is to place the institutions connected with it entirely under popular control. As is universally recognised, the growth of local self-government is intimately connected with educational extension and educational reform. It is part of the contemplated political advance that the direction of Indian education should be increasingly transferred to Indian hands. Progress all along the line must depend upon the growth of electorates and the intelligent exercise of their powers; and men will be immensely helped to become competent electors by acquiring such education as will enable them to judge of candidates for their votes, and of the business done in the Councils. The reformed Councils contemplated in this Report will be in a position to take up and carry forward boldly proposals for advance along the lines both of local self-government and of education.

Provincial Governments.—The object of the proposals is the progressive realisation of responsible government. Responsible government implies two conditions, first, that the members of the executive government should be responsible to their constituents, and secondly that these constituents should exercise their power through the agency of their represen-

tatives in the Assembly. These two conditions entail first, that there exist constituencies based on a franchise broad enough to represent the interests of the population generally, and capable of selecting representatives intelligently; secondly, that there is recognised the constitutional practice that the executive government cannot retain office unless it commands the support of a majority in the Assembly. In India, these conditions are not realised. There must be a period of political education which can only be achieved through the gradually expanding exercise of responsibility. Practical considerations, such as those outlined in paragraph 9, make the immediate handing over of complete responsibility impossible. Accordingly, the principle is adopted of transferring responsibility for certain functions of Government while reserving control over others, *while at the same time establishing substantial provincial autonomy.*

Financial Devolution.—Since substantial provincial autonomy is to be a reality, the provinces must not be dependent on the Indian Government for the means of provincial development. The general idea of these proposals on this matter is that an estimate should first be made of the scale of expenditure required for the upkeep and development of the services which clearly appertain to the Indian sphere: that resources with which to meet this expenditure should be secured to the Indian Government; and that all other revenues should then be handed over to the provincial Governments which will thenceforth be held wholly responsible for the development of all provincial services. The principal change in detail will be the abolition of divided heads of revenue. Indian and provincial heads of revenue are to be retained as at present; but to the former income tax and general stamps are to be added, and to the latter land revenue, irrigation, excise and judicial stamps. It follows that expenditure on famine relief and the protective irrigation works will fall upon the provinces, though in the matter of famine relief, the Indian Government could never wholly renounce responsibility in the case of any failure on the part of the provinces.

This arrangement will leave the Government of India with a large deficit. In order to supplement this, it is proposed to assess the contribution from each province to the Government of India as a percentage of the difference between the gross provincial revenue and the gross provincial expenditure.

On the basis of the figures taken by the framers of the proposals this percentage works out at the figure of 87, and would constitute the first charge upon the provincial revenues. The figure may be open to revision hereafter, but not subject to change for a period of, say, six years. And in the event of sudden emergency it must be open for the Central Government to make a special supplementary levy upon the provinces.

Provincial Taxation.—It is proposed that a schedule of taxation should be drawn up in consultation between the Government of India and the provincial Governments. In this schedule certain subjects of taxation are

to be reserved for the provinces, the residuary powers being retained with the Government of India. A tax falling within the schedule would not require the Government of India's previous sanction to the legislation required for its imposition, but the Bill should be forwarded to the Government of India in sufficient time for the latter to satisfy itself that the Bill is not open to objection as trenching upon the Central Government's field.

Provincial Borrowing.—In order to avoid harmful competition, it is recommended that Provincial Governments continue to do their borrowing through the Government of India. But if the Government of India find itself unable to raise the money in any one year which a province requires, or if there is good reason to believe that a provincial project would attract money not to be elicited by a Government of India loan, it is proposed that the Provincial Government might have recourse to the Indian market.

While the above proposals will give Provincial Governments the liberty of financial action which is indispensable, these Governments must also be secured against unnecessary interference by the Government of India in the spheres of legislative and administrative business. Accordingly, while the Government of India is to retain a general overriding power of legislation, for the general protection of all the interests for which it is responsible, the provincial legislatures are to exercise the sole legislative power in the spheres marked off for provincial legislative control. It is suggested that it might be recognised as a matter of constitutional practice that the Central Government will not interfere with the operations of the provincial legislatures unless the interests for which it is itself responsible are directly affected.

Executive Government in the Provinces.

In all the provinces, there is to be collective administration, the system of a Governor in Council. At the head of the Executive will be the Governor, with an Executive Council of two members, one Englishman and one Indian, both nominated by the Governor. Associated with the Executive Council as part of the Government will be one or more Ministers chosen by the Governor from among the elected members of the Legislative Council and holding office for the life of the Council.

We have seen that complete responsibility for the Government cannot be given immediately without inviting a breakdown. Some responsibility must, however, be given at once. Accordingly the plan is adopted of making a division of the functions of the Provincial Government, between those which may be made over to popular control and those which for the present must remain in official hands. How the division is to be made is explained in paragraph 23 below. These functions may be called "transferred" and "reserved" respectively. It is proposed that in the Provincial Executive constituted as explained in paragraph 19, the Governor in Council would have charge of the reserved subjects. This would be one part of the Executive. The other part of the

Executive would consist of the Governor and Minister or Ministers and would deal with the "transferred" subjects. As a general rule the Executive would deliberate as a whole although there would necessarily be occasions upon which the Governor would prefer to discuss a particular question with that part of the Government directly responsible. The decision upon a transferred subject and on the supply for it in the provincial budget would be taken after general discussion by the Governor and his Ministers; the decision on a reserved subject would be taken after similar discussion by the Governor and the members of his Executive Council.

Relation of the Governor to his Ministers.—The Ministers would not hold office at the will of the legislature but at the will of their constituents. Their salary while they were in office would be secured to them and not be at the pleasure of the Legislative Council. They, together with the Governor, would form the administration for the transferred subjects. It is not intended that the Governor should, from the first, be bound to accept the decision of his Ministers, because he will himself be generally responsible for the administration. But it is also not intended that he should be in a position to refuse assent at discretion to all his Ministers' proposals. The intention is rather that the Ministers should avail themselves of the Governors' trained advice upon administrative questions, while he on his part would be willing to meet their wishes to the furthest possible extent, in cases where he realises they have the support of popular opinion.

Where the Governor himself has no official experience of Indian conditions he may desire to add one or two **additional members** from among his officials as members without portfolio, for the purpose of consultation and advice. It is proposed that he should be allowed to do this. Also where the press of work is heavy it may be desirable to appoint some members of the Legislative Council to positions analogous to that of Parliamentary Under Secretary in Great Britain, for the purpose of assisting members of the Executive in their departmental duties and of representing them in the Legislative Council.

Provincial Legislatures.

In each province, it is proposed to establish an enlarged Legislative Council, differing in size and composition from province to province, with a substantial elected majority elected by direct election on a broad franchise, with such communal and special representation as may be necessary. The breadth of the franchise is all-important: it is the arch upon which the edifice of self-government must be raised. The exact composition of the Council in each province will be determined by the Secretary of State in Council on the recommendation of the Government of India, as a result of an investigation into subjects connected with the franchise, the constituencies and the nominated element. It is proposed that this investigation should be undertaken by a Committee consisting of a Chairman chosen from outside India, two experienced officials and two Indians of high

standing and repute. The Committee would visit each province in turn in order to investigate local conditions, and in each province one civilian officer and one Indian appointed by the provincial Government would join and assist it with their local knowledge.

It is proposed that the **communal electorates** though constituting an obstacle to the realisation of responsible government, should be retained for the Muhammadan community. Communal electorates are to be extended to the Sikhs, now everywhere in a minority and virtually unrepresented. For the representation of other minorities, nomination is proposed.

The exact number of **official members** will be for the Committee mentioned in paragraph 23 above, to consider. Members of the Executive Council should be *ex-officio* members of the Legislative Council, and there should be enough official members to provide the Government with first-hand knowledge of the matters likely to be discussed both in Council and in Committee. It is suggested that a convention might be established that official members should refrain from voting upon transferred subjects.

It is proposed that to each department or group of departments whether under a Minister or under a member of the Executive Council there should be attached a **Standing Committee** elected by the Legislative Council from among their own members. The functions of the Standing Committee would be advisory: they should see, discuss, and record their opinion upon, all questions of policy, all new schemes involving expenditure above a fixed limit and all annual reports upon the working of the departments. The member or Minister in charge of the departments concerned should preside.

Effect of Resolutions.—It is not proposed that resolutions, whether on reserved or transferred subjects should be binding; but the Council will influence the conduct of all reserved subjects and effectively control the policy in all transferred subjects. If a member of the Legislative Council wishes Government to be constrained to act in a certain way, it will often be open to him to bring in a Bill to effect his purpose; and when Ministers become, as it is intended that they should, accountable to the Legislative Council, the Council will have full means of controlling their administration by refusing their supplies or by carrying votes of censure. Subject to the sanction of the Governor, the Council will have the power of modifying the rules of business; all members will have the right of asking supplementary questions.

Divisions of Functions of Government.

—It being assumed that the entire field of provincial administration is marked off from that of the Government of India it is suggested that in each province certain definite subjects should be transferred for the purpose of administration by Ministers. All subjects not so transferred would remain in the hands of the Governor in Council. The list of transferred subjects would vary from province to province, and would naturally be susceptible to modification at subsequent stages. It is suggested that the work of division be done by a Committee similar in composition to the one described in paragraph

23 above, with which it would work in close co-operation, since the extent to which the responsibility can be transferred is related to the nature and extent of the provincial electorates. Having first marked off the field of provincial administration the Committee would proceed to determine which of the provincial subjects could be transferred. Their guiding principles should be to include in the transferred list those departments which afford most opportunity for local knowledge and social service, those in which Indians have shown themselves to be keenly interested, those which stand in most need of development. Such is the process of division. The Departments naturally lending themselves to classification as transferred subjects are taxation for provincial purposes, local self-government : education : public works : agriculture : excise and local industries.

In cases where it is subsequently open to doubt in which category a subject falls the matter should be considered by the entire Government but the final decision should lie definitely with the Governor.

In cases of matters made over to non-official control, there should in emergency be the possibility of re-entry either to the official executive government of the province or to the Government of India.

Affirmative Power of Legislation.—Assuming that the Legislative Councils have been reconstituted with elective majorities, and that the reserved and transferred subjects have been duly demarcated, we have now to consider how the executive government is to secure the passage of such legislation as it considers necessary for carrying on its business. The King's Government must go on. The process to be followed is this. For the purpose of enabling the provincial Government to carry legislation on reserved subjects it is proposed that the Head of the government should have power to certify that a particular bill is "essential to the discharge of his responsibility for the peace or tranquillity of the province or of any part thereof, or for the discharge of his responsibility for the reserved subjects." Such a certificate would not be given without strong reason and the Council might by a majority vote request the Governor to refer to the Government of India, whose decision would be final. If no reference was made, or if the Government of India decided that the Bill was properly certificated, the Bill would then be automatically referred to a Grand Committee of the Legislative Council.

The **Grand Committee** in every Council would comprise 40 to 50 per cent. of its strength and would be chosen for each Bill, partly by ballot and partly by nomination. The Governor would have power to nominate a bare majority exclusive of himself, and of the members so nominated, not more than two-thirds should be officials. The elected members would be elected *ad hoc* by the elected members of Council. The Bill would be debated in Grand Committee, and if passed by that body, would be reported to the whole Council, which might discuss but could not reject or amend it except on the motion of a member of the Executive Council. The Gover-

nor would appoint a time limit within which a Bill might be debated, and after the expiry of the time limit the Bill would pass automatically. If the Bill were not passed by the Grand Committee it would drop.

Should a Bill on a transferred subject trespass on the reserved field of legislation, it should be open to a member of the Executive Council to challenge the whole Bill or any clause of it on its first introduction, or any amendment as soon as such amendment is moved, on the ground of infringement of the reserved sphere. The Bill, clause, or amendment would be then referred to the Governor, who might allow it to proceed or certify it, in accordance with the procedure of paragraph 31 (above).

The Governor of a Province should have **power to dissolve** the Legislative Council.

The **assent** of the Governor, the Governor-General, and the Crown, through the Secretary of State, will remain necessary for all provincial legislation, whether certified or not.

It is suggested that **budget procedure** be as follows: The provincial budget should be framed by the executive government as a whole. The first charge upon the provincial revenues will be the contribution to the Government of India. Next will come the supply for the reserved subjects. So far as the transferred subjects are concerned, the allocation of supply will be decided by the Ministers; and if the revenue available is insufficient for their needs, the question of additional taxation will be decided by the Governor and the Ministers. The budget will then be laid before the Council, which will discuss it and vote by resolution. The budget would be altered in accordance with the resolutions of the Council except in the following case. If the Council reject or modify the allotment of reserved subjects, it would be in the Governor's power to certify its necessity, in the terms mentioned in paragraph 31 (above) and to insist upon the retention of the allotment which he declares essential for the discharge of his own responsibilities.

Safeguards.

A great safeguard to the working of the system is the proposal that a periodic Commission shall review proceedings. Both the Government on one hand and the Legislative Council on the other, will decide their course of action in the knowledge that their conduct will in due course come under review by a Commission. Before this Commission there will be an opportunity of arguing, on the one hand, that the reserved subjects have been extravagantly administered, or that the Governor in Council has unnecessarily disregarded the wishes of the Legislative Council, or on the other hand, that the attitude of the Legislative Council with regard to expenditure upon reserved subjects has been so unreasonable as to make it unsafe to transfer further powers.

It is suggested that ten years after the meeting of the new Councils, a **Commission** should be appointed to review the whole working of these institutions in order to determine whether it would be possible to improve in any way the existing machinery or to advance further toward

the goal of complete responsible government in any province or provinces. This Commission should be authoritative, deriving its authority from Parliament itself; and the names of the commissioners should be submitted by the Secretary of State to both Houses for approval. The functions of the Commission will, indeed, be of the utmost importance: it will represent a revival of the process by which the affairs of India were subjected to periodical examination by investigating bodies appointed with the approval of Parliament. It is proposed that the further course of constitutional development in the country shall be investigated at intervals of twelve years.

The Commission should also consider the progress made in admitting Indians to the higher ranks of the Public Service: the adjustment of the financial burden between the provinces: the development of education: the working of local self-government: the constitution of electorates: the working of the franchise: and similar matters.

Development in the Provinces.—The proposal is that as the popular element of the Government acquires strength and experience, subjects will be taken from the reserved list, and placed upon the transferred list until at length the reserved subjects disappear and the goal of complete responsibility is attained. It is suggested that after five years from the first meeting of the new Councils, the Government of India should hear applications from the provincial Governments or the provincial council for the modification of the reserved and transferred lists of the province; and that after hearing the evidence they should recommend to the Secretary of State such changes as may seem desirable.

It is desirable also to complete the responsibility of Ministers for the transferred subjects. It should be open for the Government of India when hearing such applications, to direct that the Minister's salaries, instead of being secured to them for their period of office should be specifically voted year by year by the Legislative Council: and it should be open to the Legislative Council to demand a resolution that Minister's salaries should be so voted. This would result in the Ministers becoming Ministers in the Parliamentary sense, dependent upon a majority in the legislature.

Government of India.

The general idea of the proposals is to create an enlarged Legislative Assembly with an elected majority: to reserve to the decision of a new Council of State, in which Government will have a bare majority, only those measures which it must retain power to carry in discharge of its continued responsibility for the good government of the land: to restrict the official *bloc* to the smallest dimensions compatible with same principles: to institute a Privy Council: and to admit a second Indian Member into the innermost counsels of the Indian Government.

Pending the development of responsible government in the provinces, the Government of India must remain responsible only to Parliament, and saving that responsibility, must retain

indisputable power in matters which it judges to be essential to the fulfilment of its obligations for the maintenance of peace, order and good government.

The Executive Council.—It is recommended that the existing statutory restrictions in respect of the appointment of members should be abolished to give greater elasticity in the size of the government and the distribution of work.

It is recommended that another Indian member be appointed as soon as may be.

The Legislature.—It is proposed that the strength of the Legislative Council to be known henceforth as the Legislative Assembly of India, should be raised to a total strength of about 100 members. Two-thirds of this total should be returned by election: one-third to be nominated by the Governor-General and of this third not less than a third again should be non-officials representing minorities or special interests, such as European and Indian commerce, and the large landlords. The normal duration of an Assembly to be three years.

Electorates and constituencies for the Indian Legislative Assembly should be determined by the same Committee entrusted with the investigation of electorates and constituencies for the provincial Councils.

The power of **nomination of non-official members** is to be regarded as a reserve in the hands of the Governor-General enabling him to adjust inequalities and supplement defects in representation. Nominations should not be made until the results of the elections are known and should be made after informal consultation with the Heads of Provinces.

The maximum number of **nominated officials** will be two-ninths and it will rest with the Governor-General to determine whether he requires to appoint up to the maximum. Official members of the Assembly other than members of the Executive Government, should be allowed a free right of speech and vote except when Government decides their support is necessary.

Special Appointments.—Members of the Assembly, not necessarily elected or non-official, may be appointed to positions analogous to those of Parliamentary Under Secretaries in England. The President of the Legislative Assembly should be nominated by the Governor-General.

Affirmative Power of Legislation.—During the transitional period, the capacity of the Government of India to obtain its will in essential matters necessary for the good government of the land is to be secured by the creation of a second chamber known as the Council of State, which shall take its part in ordinary legislative business and shall be the final legislative authority in matters which the Government regards as essential. The object is to make assent by both bodies, the normal condition of legislation; but to establish the principle that in the case of legislation certified by the Governor-General as essential to the interests of peace, order and good government, the will of the Council of State should prevail.

The **Council of State** will be composed of 50 members exclusive of the Governor-General who would be President. Not more than 25 members including the members of the Executive Council would be officials, and four would be non-officials nominated by the Governor-General. There would be 21 elected members returned by non-official members of the provincial legislative councils, each council returning two members with the exception of Burma, the Central Provinces and Assam which would return one member each. The remaining 6 elected members are to supplement the representation of the Muhammadans and the landed classes and to provide for the representation of the Chambers of Commerce. The Council of State is to possess a senatorial character and the qualifications of candidates for election should be so framed as to secure men of the status and position worthy of the dignity of a revising chamber. Five years would be the normal duration of a Council of State.

Legislative Procedure.

Ordinarily a Government Bill will be introduced into the Legislative Assembly and after being carried through the usual stages it would go to the Council of State. If there amended in a way which the Assembly is not willing to accept, it would be referred to a joint session of both houses by whose decision its fate would be decided. But if the amendments introduced by the Council of State were in the view of Government essential to the purpose for which the Bill was originally introduced, the Governor-General in Council would certify them to be essential to the interest of peace, order or good government. The Assembly would then have no power to reject or modify the amendments nor would they be open to revision by a joint session.

A **private Member's Bill** would be introduced into whichever of the two houses the mover sat, and after passing through the usual stages, would be taken to the other chamber and carried through that. In the case of a difference of opinion, the Bill would be submitted to a joint session, by which its final fate would be determined. But if the Governor-General in Council were prepared to give a certificate in the terms already stated that the form of the Bill was prejudicial to peace, order, and good government, the Bill would go, or go back, to the Council of State and only become law in the form there finally given to it.

The general principles of the legislative procedure proposed are that in the case of all save certificated legislation, the will of the non-official members of both chambers taken together should prevail, while in the case of certificated legislation, the Council of State should be the final authority.

Power of Dissolution, etc.—The Governor-General should have power at any time to dissolve the Legislative Assembly, the Council of State or both bodies. The Governor-General and the Secretary of State naturally retain their existing powers of assent, reservation and disallowance to all Acts of the Indian legislature.

Fiscal legislation will be subject to the procedure recommended in respect of Govern-

ment Bills. The budget will be introduced into the Assembly, but the Assembly will not vote it. Resolutions upon budget matters and upon all other questions whether moved in the Assembly or in the Council of State will continue to be advisory in character.

Standing Committees, drawn jointly from the Assembly and from the Council of State, should play, so far as possible under the circumstances, a similar part to that suggested in the case of the Standing Committees in the provincial legislatures.

Any member of either House might be entitled to ask **supplementary questions**. The Governor-General should not disallow a question on the ground that it cannot be answered consistently with the public interest, but power is still to be retained to disallow a question on the ground that the putting of it is inconsistent with the public interest.

His Majesty may be asked to be pleased to approve the institution of a **Privy Council in India**. Appointments to be made by His Majesty for life; and such appointments to be confined to those, whether officials or non-officials, from British India and from the Native States, who had won real distinction or occupied the higher offices. The Privy Council's office would be to advise the Governor-General when he saw fit to consult it on matters of policy and administration.

Future Progress.—Equally with the Provincial Machinery the Central Machinery will be subjected to periodical revision by the Commission approved by Parliament.

The India Office.

Since His Majesty's Government have declared their policy of developing responsible institutions in India, Parliament must be asked to set certain bounds to its own responsibility for the internal administration of the country.

In transferred matters.—It should be laid down broadly that in respect of all matters in which responsibility is entrusted to representative bodies in India, Parliament must be prepared to forego the exercise of its own powers of control, and this process must continue as responsibility in the provinces, and eventually in the Government of India itself, gradually develops. Parliament cannot retain the control of matters which it has deliberately delegated to representative bodies in India.

In reserved matters.—While in reserved subjects there cannot be any abandonment by Parliament of ultimate powers of control, there should be such delegation of financial and administrative authority as will leave the Government of India free, and enable them to leave the Provincial Governments free to work with the expedition that is desirable. A wider discretion should be left to the Governor-General in Council; and certain matters now referred home for sanction might in future merely be referred to the Secretary of State for information. It is hoped that Parliament will authorise the Secretary of State to divest himself of the control over the Government of India in certain matters even though these continue to be the concern of official governments.

A Committee should be appointed forthwith to reconsider the **organization of the India Office**, with a view to providing for the material alteration of functions involved by these proposals and for the more rapid discharge of its business.

The Secretary of State's salary should be defrayed from home revenues and voted annually. This would enable any live questions of Indian administration to be discussed by the House of Commons in Committee of Supply.

In order to provide for informed criticism and discussion of questions connected with India, it is proposed that the House of Commons should be asked to appoint a **Select Committee on Indian affairs**. It would inform itself upon Indian questions, and report to the House before the annual debate on the Indian estimates. By means of interrogations of the Secretary of State and requisitions for papers, the members of the Committee would keep themselves referred on their Indian affairs and to them Indian Bills might be informed upon second reading.

The Native States.

In view of the fact that the contemplated constitutional changes in British India may react in an important manner on the Native States, it is necessary to assure the Princes, in the fullest and freest manner, that no constitutional changes which may take place will impair the rights, dignities and privileges secured to them by treaties, sanads and engagements, or by established practice. Further, all important States should be placed in direct communication with the Central Government as an aid to good understanding and the speedy conduct of business.

It is recommended that a **Council of Princes** be called into existence as a permanent consultative body, ordinarily meeting once a year to discuss agenda approved by the Viceroy, who should be President. The opinion of such a body would be of the utmost value upon questions affecting the States generally or British India and the States in common.

The Council of Princes should be invited annually to appoint a small Standing Committee to which the Viceroy or the Political Department might refer matters of custom and usage affecting the States.

Commissions of Enquiry.—Should dispute arise between two or more States, or between a State and Government, the Viceroy might appoint a Commission of enquiry to report upon the matter in dispute. Such a Commission might be composed of a judicial officer of rank not less than a High Court Judge, and one nominee of each of the parties concerned.

In the case of misconduct, matters might be referred by the Viceroy to a Commission appointed to advise him. Such a Commission should ordinarily consist of five members including a High Court Judge, and two Ruling Princes.

Joint Deliberations.—With the establishment of a Council of Princes, of a Council of State, and of a Privy Council, the machinery will exist for bringing the senatorial

institutions of British India more closely into touch with Rulers of the Native States. The Viceroy, when he thought fit, might arrange for joint deliberation and discussion between the Council of State and the Council of Princes, and might invite members of the Council of Princes to serve on Committees of the Privy Council.

The Public Services.

The policy of the increasing association of Indians in every branch of the administration was placed in the forefront of the announcement of August 20. The characteristics which have enabled the services to confer benefits upon India in the past, must be adequately maintained in the future; and the solution lies in recruiting year by year such a number of Indians as the existing members of the services will be able to train in an adequate manner and inspire with the spirit of the whole.

Appointments are to be made to all branches of the Public Service without racial distinction.

For all public services, for which there is a system of recruitment in England open to Indians and Europeans alike, there must be a system of appointment in India.

The Civil Service.—It is suggested that thirty-three per cent. of the superior posts should be recruited for in India, and that this percentage should be increased by one and a half per cent. annually, until the periodic commission is appointed which will re-examine the whole subject. A re-adjustment of the rates of pay and pension is recommended.

There should be a fixed percentage increasing annually of recruitment in India. This percentage will not be uniform for all Services as the particular figures must depend upon their distinctive characteristics and functions. As in the case of the Civil Service, a re-adjustment of the rates of pay and pension is recommended.

The granting of a considerable number of **King's Commissions** to Indians is recommended. Race should no more constitute a bar to promotions in the Army than it does in the Civil Service.

Industries and Tariffs.

The proposals lay stress upon the necessity for Government action in developing the resources of the country, and for the recognition by Government of the necessity for a forward industrial policy. The extent and form of State assistance will doubtless be determined by the reformed Governments of the future, having the advice of the Industrial Commission before them, and with due reference to Imperial interests.

Concluding Note.

The general principle kept in mind in framing these proposals has been the progressive realisation of responsible government. The arrangements contemplated by these proposals are admittedly transitional. They are to be open to revision. The proposals themselves are tentative. They are now open to discussion.

GOVERNMENT OF INDIA'S DESPATCH.

A number of despatches and reports dealing with the Reform Scheme were published in 1919, of which the first was a despatch by the Government of India, dated March 5, 1919.

That despatch opens with a description of the reception of the Report in India, dealing in turn with the views of Indians, non-official Europeans, officials and local Governments. Different types of Government are then considered. It is shown that no type of unified Government which would comply with the announcement of August 20, 1917, is practicable in present circumstances. All local Governments except two declared for a unified system and a majority of the Heads of Provinces who met at Delhi in January 1919 embodied their proposals in a joint minute. These proposals are considered at length and reasons given for rejecting them. The Government of India then declare themselves definitely in favour of a dual system, modified in certain respects.

The main features of the structure of the **Provincial Executive** proposed in the Report are accepted, save that it is suggested that there should be no members without portfolios and that in cases where a Governor lacks Indian experience the council should include two official members. The Government of India understand that Heads of Provinces other than the presidencies will for the present be drawn from the services and they would provide by statute for the appointment of one official and one Indian member of council. Ministers should be appointed from the elected members of, and should be amenable from the outset to, the provincial legislature. Their number and pay should be fixed by the Governor in consultation with the prospective ministers and placed on the transferred estimates.

It is recommended that the main rights and duties of the **Public Services** in India should be reduced to statutory form, and proposals are submitted as a basis for the necessary law. Classification of the services into Indian, provincial, and subordinate divisions is recommended, the chief criterion being the appointing authority. No option of serving under ministers and no general offer of proportionate pensions are recommended, but the task of protecting the services is laid definitely upon the Governor: in extreme cases officers should be entitled to apply for proportionate pensions. Officers having duties in both reserved and transferred departments should, for purposes of posting, promotion and discipline, be under the control of that part of the Government which is concerned with the budget head from which their pay is met. Provision should be made in the Bill for the establishment of a Public Services Commission.

The **Financial Proposals** involve two important variations from the Report Scheme. In the first place, it is proposed to aim at a more equitable division among the provinces of the burden of Imperial finance. While the proposals in the Report are accepted as a basis for the initial provincial contributions to the Central Government, it is proposed that a

committee on Financial Relations be appointed to fix a fairer scale of contributions for the future, and to advise how it can be reached.

In the second place, the Report proposal whereby the revenues of the provincial Governments will be treated as a whole and the amount to be allotted to each half of the Government will be decided yearly at budget time after consultation between the executive council and ministers is rejected. It is held that this system (1) renders impossible the regulation of overdrafts on balances, taxation and borrowing, (2) gives to each half of Government an indefensible power of interference with the other half, (3) will be productive of unnecessary friction, and (4) offers no incentive to either half to develop its own resources. In its place the system of the separate purse is proposed, under which each half of the Government will be given a share of the provincial balances, the receipts from its own heads of revenue and a share of the estimated normal surplus, and any adjustments which require to be made so as to provide for the needs of either part of the Government will be made by the grant either of a fraction of some head of revenue or of a growing allotment in cash. The first division of resources would be temporary and thereafter the division would be adjusted periodically. Each half of the Government would be given separate powers of taxation and borrowing, all proposals of this nature being first laid before the whole Government. The budget would be a single one prepared in Finance Department and would be discussed in the legislature but not voted by it. Resolutions would have effect as recommendations only, but if carried against a minister the latter would have to consider whether they involve a vote of want of confidence. There would be a single Finance Department with a Joint Secretary to guard the interests of transferred subjects, and the legislature would be asked to appoint a committee on public accounts to advise it on all surcharges and disallowances of the auditor and all serious departures from budget provisions.

The **Legislative Arrangements** proposed in the Report are generally accepted. The composition of the grand committee is reserved for further consideration and it is recommended that there should be no right of appeal against the Governor's decision in the matter of certification. The proposals regarding the Governor's powers of assent, dissolution, etc., are approved. It is also proposed that the Governor should have power to reserve certain acts for the assent of the Governor General. No provision is thought necessary for the establishment of Upper Houses. It is agreed that the Governor should be President of the legislative council with power to nominate the Vice-President, and in regard to rules of business it is proposed that fundamental rules, affecting the powers of the different elements of the constitution, should be distinguished from standing orders of council, the latter being framed by local Governments and alterable by the council with the sanction of the Governor. The right of asking supplementary ques-

tions should be extended to all members, and official members should have freedom of speech and vote on all subjects except in so far as Government thinks it necessary to give them instructions. The Report proposals regarding the effect of resolutions are accepted, as are also subject to certain conditions those regarding standing committees and council under-secretaries.

It is proposed that **Rules of Business** should be framed to regulate the disposal of cases in transferred subjects. The circumstances in which the Governor will be entitled to intervene in transferred subjects should be defined in the instrument of instructions which should be a published document. If a minister finds himself unable to acquiesce in the action proposed by the Governor, the latter should be empowered to call on him to resign, and, if he is unable to find another minister immediately, to take over the control of the departments concerned. If the Governor is unable within six months to find a minister, he should move the Secretary of State to re-transfer the portfolio to the Governor in Council.

When differences arise as to the disposal of a case affecting a reserved and a transferred department, the Governor should be able to intervene and, if he thinks fit, submit the case for consideration by other members and ministers than those concerned, but the final decision should remain with the department to which the case properly belongs. When it is doubtful to which department a case belongs, the decision should lie with the Governor. Orders of the two parts of the Government should be distinguished so as to make it clear from which side they emanate. Each half of the Government must refrain from opposition to the other half, but should not be expected to give active support to a policy which they have not endorsed.

The proposal to have periodic **Statutory Commissions** is approved, but any intermediate changes before the appointment of the first commission are objected to.

The proposal to have two **Indian Members** on the Governor-General's executive council, the abolition of the statutory restriction on the number of members of the council are accepted; but it is recommended that the appointment of two officials, one lawyer, and two Indians, should be secured by statute. Recommendations in regard to the constitution and powers of the Assembly and the Council of State are reserved pending the consideration of the franchise committee's proposals. It is agreed that the President of the Assembly should be an official nominated by the Governor-General, that powers of assent, reservation and disallowance to all acts of the India legislature should remain as at present, that the existing powers of making regulations and ordinance should be maintained, that the Governor-Generals should have power to return a Bill for reconsideration and to dissolve either the Assembly or the Council of State, and that in the matter of resolutions, questions, rules of business, etc., the Indian legislature should be on the same footing as provincial councils. The establishment of a Privy Council is approved but the proposals to appoint standing committees and council under-secretaries for the Indian legislature are regarded as premature.

The Report proposals regarding the relaxation of the **Control of the Secretary of State and Parliament** and the transfer of the Secretary of State's salary to the Home Estimates are approved, and the proposal to institute a committee of Parliament on Indian affairs is welcomed and the suggestions made that the committee should include members of both Houses. Opinion on the reorganisation of the India Office is reserved pending the report of the India Office committee.

MINUTE BY THE VICEROY.

The despatch has appended to it the following Minute by His Excellency the Viceroy, dated March 5, 1919 :—

I feel it right to append a minute to this despatch, not of dissent but by way of personal explanation.

In 1916 my Government forwarded a despatch to the Secretary of State framing an announcement of policy and the first steps to be taken in pursuance of the policy enunciated. The despatch was subjected to criticism—criticism which I accept as sound—that it failed to fix the enlarged Councils with responsibility. A mere increase in numbers it was said did not train Indians in self-government. It did not advance this object unless the Councils were at the same time fixed with some definite powers and with real responsibility for their actions.

It is to my mind evident that such criticism was the genesis of the form of the announcement of policy made by the Secretary of State on behalf of His Majesty's Government on August 20th. That announcement had three outstanding features. First, the progressive

realisation of responsible government is given the keynote and objective of British policy in India; secondly, substantial steps are to be taken at once in this direction; and thirdly, this policy is to be carried out by stages. I think I shall not be stating the basic principle of this policy unfairly when I sum it up as the gradual transfer of responsibility to Indians.

The Secretary of State was deputed by His Majesty's Government to proceed to India to discuss the whole question with myself and my Government, and the results of our discussion are embodied in the Joint Report which we presented to His Majesty's Government.

The Severest Criticism—We took as our terms of reference the announcement of August 20th, and I confidently assert that in the proposals we have made we have not swerved from the terms of that announcement. The progressive realisation of responsible government is the basis of our proposals; substantial steps to be taken at once in this direction are formulated and we have provided through the machinery of the periodic commission for the achievement of the policy announced by successive stages.

We have not overlooked the very grave and real difficulties which lie in the path of the policy proposed. They are set out at length throughout the Report, but especially in the Chapter entitled the Conditions of the Problem, and in my perusal of the criticisms of the Report I have seen no difficulties stated which we have not ourselves emphasised. As regards the proposals themselves no criticism which has been directed against them is more severe than our own statement of the case in paragraph 354 of our Report.

"As we have said already because it (the Report) contemplates transitional arrangements, it is open to the criticisms which can always be effectively directed against all such plans. Hybrid executives, limited responsibility, assemblies partly elected and partly nominated, divisions of functions, reservations, general or particular, are devices that can have no permanent abiding place. They bear on their faces their transitional character; and they can be worked only if it is clearly recognised that that is their justification and their purpose. They cannot be so devised as to be logical. They must be charged with potentialities of friction. Hope of avoiding mischief lies in facing the fact that they are temporary expedients for training purposes, and in providing that the goal is not merely kept in sight, but made attainable, not by agitation but by the operation of machinery inherent in the scheme itself."

Meaning of Responsibility.—I have quoted this passage to show that the Secretary of State and I did not shut our eyes to the very grave difficulties attendant on our scheme. But to what are these difficulties due? They are not to any perverse ingenuity on the part of the Secretary of State and myself in the framing of our proposals. They are inherent in the principle underlying the announcement to which we were bidden to give effect, *viz.*, the gradual transfer of responsibility to Indians. And I wish here to endeavour to define what I mean by responsibility. There has been much discussion as to what is meant by responsibility, responsibility to constituents, responsibility to legislative councils and the like, and I cannot but think that there has been much talk and writing on this subject which is beside the mark, and perhaps our Report is equally guilty with others in this respect. What are we aiming at in our policy? Surely this, that the decision of certain matters—I will not discuss what matters—shall rest with Indians; that in these matters it will be for them to say "Yes" or "No" and that our scheme shall provide, as far as possible, for everybody knowing that the decision in any particular matter is their decision, that the "Yes" or "No" is their "Yes" or "No". This definition of the responsibility to be attained by Indians is one to which, I believe, most people will subscribe, and I believe it to be the responsibility at which His Majesty's Government were aiming when they made their declaration of policy.

It is one thing however to enunciate a principle; it is another thing to translate the principle into practice. The Secretary of State and I have had the task imposed upon us of translating the principle of the gradual transfer of responsibility to Indians into practice. We

explored every road, we followed up every path which seemed to lead to the goal we had in view, but we always came back to this, that if responsible government is to be progressively realised through the gradual transfer of responsibility, as defined above, the only method by which this can be attained is one which involves the division of the functions of government between two different sets of authorities, a method which has been compendiously styled "dyarchy."

Objections to Unitary System.—In a unitary government, short of a unitary responsible government, you cannot fix responsibility upon Indians. You can associate Indians with the Government, but you cannot fix them with responsibility in the sense that anyone can see at a glance that the decision in any particular case is their decision. Moreover, in a unitary government there is no room for the gradual transfer of responsibility. There is only one step from irresponsibility into the full responsibility which responsible government connotes. By the dyarchic method, however, you can insure full responsibility in certain subjects with machinery to extend that responsibility to other subjects as occasion permits. The division of subjects between the official portion of the Government and the Indian portion of the Government insures that each portion is fixed with responsibility for its actions in the sphere allotted to it. Such a division is full of difficulties as critics of our scheme have not failed to point out, but they are the price which we must be prepared to pay, if we are to translate the principle underlying the announcement of August into practice, and make the transfer gradual.

I think I may bring out in greater relief the broad difference between the schemes of unitary government and dyarchy, if I analyse the scheme propounded by five Heads of Local Governments which is forwarded with the despatch. I welcome the scheme because it is possible from a comparison between it and the scheme of the Report to appreciate the issue between a unitary and a dyarchic government.

In paragraph 3 of the minute it is said "While the announcement of His Majesty's Government in Parliament rightly placed the association of Indians with the Government in the foreground of the policy, the idea of association has been overshadowed and obscured by the idea of responsibility."

His Majesty's Government are the sole judges of what was meant by the announcement of August 20th. I have at the beginning of this minute discussed what I believe to be the genesis of the announcement of August 20th and what I regard as its main features and its underlying principle.

If I am wrong as to these, the foundation of the arguments in the preceding pages disappears, but I will examine the scheme of the Heads of Local Governments on the assumption that I am correct.

Local Governments' Proposals.—The main features of the scheme may be said to be—

(1) A Council of equal numbers of officials and non-officials, the latter selected from elected members,

- (2) No division of subjects.
- (3) Legislative Council to be as in the joint Report.
- (4) The Governor to have powers to overrule his Executive Council under section 50 of Government of India Act, 1915.
- (5) Legislation to be as in joint Report, Grand Committee to exist, but the Governor to have a free hand in the selection of members nominated for it and Governor to have powers of certification in the terms of section 50 mentioned above.
- (6) Budget to be voted by the Legislative Council, but Governor to have power to restore any item in terms of section 50.

It can, I think, be seen at once that the pith of the scheme lies in the constitution of the Executive and in the non-division of subjects. The other features are either those of the joint Report or modifications of it. Can it be said that in the Unitary Executive as proposed it will be possible to fix the Indian portion of the Executive with responsibility in the sense in which I have used it in this minute, *viz.*, that it will be for them to say "Yes" or "No" in certain matters and that everybody will know that the "Yes" or "No." is their "Yes" or "No." Their position will not be different from that enjoyed by Indian Members of Executive Councils at the present moment, under which the predominance of the British element always shields the Indian Member from any direct responsibility in respect of actions of the Government. He can always point to the majority against him as responsible for the action taken.

Again, on the assumption that "the gradual transfer of responsibility" is the basic principle of the announcement, I believe that under the scheme of the Heads of Local Governments, there can only be one step from a position of irresponsibility to one of full responsibility. Under this scheme advance can only be by an increase of numbers of Indians in the Executive Council and granted that the initial numbers of British and Indians are two and two, an increase of one to the Indians places them in full control. Let me quote from the minute of dissent of Lord Ronaldshay and Sir Edward Gait to the scheme under discussion. "It is true that if the scheme of the joint Report be adopted, there will be continued agitation for an increase in the number of transferred subjects. But under the alternative scheme there will be an equally strong agitation for an increase in the number of non-official Members of the Government; and concession to that agitation would be far more dangerous, as it would involve a sudden transfer of all power from the official to the non-official members, subject to the power vested in the Governor by section 50 of the Government of India Act, which, however, he could exercise only on very special occasions."

The Legislative Councils.—It still remains for me to examine the position of the Legislative Councils under this scheme. The Heads of Local Governments rely on the machinery of the Grand Committee and the use of the certificate to carry their affirmative legislation.

In so far as they find themselves able to use this machinery in the whole domain of government, they will reduce the Councils merely to bodies of irresponsible critics to whom no power is given, in whom no responsibility is fixed, but whose numbers are materially increased. In so far as they do not use the machinery they will reproduce the position of Canada described in the Durham Report—an irremovable executive and an irresponsible but supreme legislature. It might be said that this same argument recoils on my head in respect of our treatment of reserved subjects. But to this objection I would point out that we have advisedly not introduced the principle of responsibility into that sphere, while in the sphere of the transferred subjects the principle has full play.

The potentialities of friction, which are predicted for the dyarchic scheme, will thus, to my mind, be equal if not greater in their proposals and the saving grace of responsibility will find no place.

Once more,—I have seen schemes under which a combination of division of subjects with a unitary executive is proposed. I would ask those who suggest such schemes to test them by the two principles which I understand are basic in the announcement, of fixation of responsibility and of gradual transfer of responsibility. I do not believe they will survive the test. But let me state the problem in another way. The division of subjects is incompatible with Unitary Government. The moment you divide subjects you necessarily divide the Government, otherwise there is no meaning in the division. You divide subjects in order to allocate those which are to be under the control of the Legislative Councils to Members of the Government, who would owe allegiance to the Councils. By division of subjects then you at once introduce dualism into the Government, and have two portions of one Government owing allegiance to different authorities.

Need for Prompt Action.—I have confined myself in this minute to the one point whether or not the advance is to be by way of the gradual transfer of responsibility. This to my mind must be settled before it is profitable to discuss the details of the proposals. I have traced the history of the promulgation of this principle. It is for His Majesty's Government to decide whether I have traced it aright and whether I have correctly interpreted their announcement of August 20th. The idea of responsibility was, as I believe, introduced into that announcement deliberately and I have endeavoured loyally to carry it out in the proposals for which the Secretary of State and I were jointly responsible. I leave it then for the decision of His Majesty's Government, but I earnestly press upon them the imperative necessity of action in fulfilment of their announcement. I agree with the opinion expressed by His Excellency the Governor of Bombay, in a note written to me in connection with the Conference of Heads of Provinces, that "time is a factor of vital importance in the consideration of the whole question of Reforms," "I am convinced," he says, "that delay is a greater danger even than an imperfect scheme, and that those of us on whom must fall the heavy burden

of putting reforms schemes into actual operation will be better able to work an imperfect scheme with the good-will and confidence of all concerned than to operate a more perfect scheme—if one can be devised—when confidence and good-will have been broken and alienated by dis-appointment and delay.”

One last word—The Secretary of State and I asked for publication of our Report because, as we said, “our proposals can only benefit by reasoned criticism both in England and India,

official and non-official alike.” That criticism, so far as India is concerned, has been received and along with my colleagues in the Government of India, I have carefully weighed it. The results of our consideration are embodied in the amendments suggested by us in our despatch. We have not departed from the underlying principle of the Report; and I believe that we have done much to clarify and strengthen the proposals as a practical scheme.

CHELMSFORD.

REPORT ON FRANCHISE.

The Committees on Franchise and Subjects, foreshadowed in the Montagu-Chelmsford report, were duly appointed under the chairmanship of Lord Southborough and their reports were issued in 1919.

The Franchise Committee's Report is summarised as follows:—

Provincial Councils.—The committee recommend the retention of the existing general disqualifications of electors and the addition of a further disqualification based on nationality which would not, however, apply to subjects of Indian States. They decided that the social conditions of India make it premature to extend franchise to women.

It is proposed that the general franchise should be based on residence within the constituency and the possession of certain property qualifications as evidenced by the payment of land revenue, rent or local rates in rural areas, and of municipal rates in urban areas, and of income tax generally. An important exception to these general principles is the recommendation to enfranchise all retired and pensioned officers of the Indian Army. No attempt has been made to arrive at any uniform property qualification. The qualifications proposed vary not only from province to province; but also, in some cases, in different areas within the same province. An important point is that the same qualification is proposed for all communities within the same area.

The number of electors, which the franchise proposed for the various provinces will give, is roughly estimated as follows:—

Madras	..	..	..	542,000
Bombay	..	..	..	653,000
Bengal ..	..	..	..	1,228,000
United Provinces	..	..	..	1,483,500
Punjab	..	..	..	237,000
Bihar and Orissa	..	..	..	576,000
Central Provinces	..	..	..	159,500
Assam ..	..	..	..	300,000

It is proposed to replace the existing system of indirect election to the provincial legislative councils by a system of direct election. The district will ordinarily be the electoral unit but in some provinces single cities with large populations and in other provinces smaller towns in groups will form urban constituencies. Single member constituencies are generally recommended but some latitude is left to local

Governments in this matter. The committee are opposed to the introduction of elaborate systems of voting, such as proportional representation, the limited vote and the cumulative vote. They recommend that plural voting should be forbidden except where a constituency returns more than one member in which case each elector will have as many votes as there are members. Electors will also be allowed to vote in one general or communal constituency in addition to voting in a special constituency.

The average number of electors in the general and communal constituencies in the various provinces is estimated to be as follows:—

Madras	..	..	..	7,200
Bombay	..	..	..	8,900
Bengal ..	..	..	..	16,400
United Provinces	..	..	..	17,700
Punjab	..	..	..	4,900
Bihar and Orissa	..	..	..	9,100
Central Provinces	..	..	..	3,400
Assam ..	..	..	..	9,700

The size of individual constituencies will, however, vary enormously, from 500 electors in the Muhammadan constituency composed of the towns of Madura, Trichinopoly and Srirangam to 96,000 in the constituency of Almora in the United Provinces.

The size of the council which the Committee recommend for each province is as follows:—

Madras	..	..	..	118
Bombay	..	..	..	111
Bengal ..	..	..	..	125
United Provinces	..	..	..	118
Punjab	..	..	..	83
Bihar and Orissa	..	..	..	98
Central Provinces	..	..	..	70
Assam ..	..	..	..	53

In the presidencies and the United Provinces the proportion of elected members proposed is from 78 to 80 per cent. of the total membership, and in the remaining four provinces from 73 to 75 per cent. The proportion of officials proposed is 15 per cent. in the United Provinces, 16 per cent. in the three presidencies and Bihar and Orissa, 17 per cent. in the Central Provinces and Assam and 19 per cent. in the Punjab.

The interests to be represented by nomination are :—

(i) the depressed classes in all provinces, except the Punjab ;

(ii) Anglo-Indians in all provinces, except Madras and Bengal, where representation will be by election ;

(iii) Indian Christians in all provinces, except Madras, where they will have a special electorate, and the Central Provinces ;

(iv) labour in Bombay, Bengal, Bihar and Orissa and Assam ;

(v) excluded tracts in Madras and the Central Provinces ;

(vi) military interests in the Punjab ;

(vii) industrial interests other than planting and mining ;

(viii) aborigines and domiciled ;

(ix) Bengalis, all in Bihar.

The number of nominated non-official members proposed varies from 4 in Bengal and the United Provinces to 9 in Bihar and Orissa and Assam.

Special electorates are proposed for the following interests :—

(i) universities, in all provinces except Assam ;

(ii) landholders and

(iii) commerce and industry, both in all provinces.

The number of landholding members varies from 2 in Assam to 7 in Madras and of representatives of commerce and industry from 2 in the Punjab and the Central Provinces to 15 in Bengal. In the representation of commerce and industry the following special interests share :

(i) planting in Madras, Bihar and Orissa and Assam ;

(ii) mining in Bengal, Behar and Orissa and the Central Provinces ;

(iii) European Chambers of Commerce in Madras, Bombay, Bengal and the United Provinces ;

(iv) Indian Chambers of Commerce in the same four provinces ;

(v) Trades' Associations in the three presidencies ;

(vi) and (viii) Millowners' Association and cotton trade in Bombay ;

(viii) (ix) (x) and (xi) the jute trade, the tea trade, Indian Associations and Inland Water Transport Board in Bengal ;

(xii) general industrial interests in the Punjab, Bihar and Orissa, Central Provinces and Assam.

The extension of a system of **communal electorates** is proposed in the interests of (1) Indian Christians to whom three seats are given in Madras ; (2) Anglo-Indians who are given one seat each in Madras and Bengal ; (3) Europeans who are given two seats in Bombay and Bengal

and one seat in Madras, the United Provinces and Bihar and Orissa ; and (4) Sikhs to whom eight seats are given in the Punjab. In the case of Muhammadans, the existing system of communal election is retained and following the Congress League agreement the committee propose to give Muslims the following proportion of Indian elected seats :—

	per cent.
Madras	15
Bombay	34
Bengal	40
United Provinces	30
Punjab	50
Bihar and Orissa	25
Central Provinces	14

The claims to separate electorates of the following minor communities are not supported. Mahishyas of Bengal and Assam, Marwaris of Calcutta, Bengali domiciled community of Bihar and Orissa, Ahoms of Assam, Mahars of the Central Provinces, Uriyas of Madras and Parsis of Bombay. The majority of the committee would also reject the claims of the Mahrattas. In regard to non-Brahmans of Madras, the committee observe that they were deprived of the opportunity of examining the non-Brahman leaders and of testing their views since they refused to appear before the committee. The communications from Dr. Nair and other non-Brahman leaders are included in an appendix (XV) to the report. The committee regret that the refusal of these leaders to appear at the enquiry made a settlement by consent impossible. They considered certain solutions of the non-Brahman 'problem' ; but in the end decided to make no difference between Brahmans and non-Brahmans ; but they add a suggestion that the matter may be further considered hereafter if the non-Brahmans make a move.

Few changes are proposed in regard to the **qualifications of candidates.**

The most important are :—

(1) the removal of the disqualification of subjects of Indian States.

(2) the limitation of the disqualifications of dismissal from Government service and imprisonment ;

(3) the withdrawal of the Governor's power to declare the election of a candidate as contrary to public interests ; and

(4) the addition of a new qualification of residence within the constituency in the provinces of Bombay, the Punjab and the Central Provinces.

The Indian Legislature.—The committee recommend that the Assembly should have a total strength of 120 members, or including the Governor-General in Council 121. 80 members should be elected, distributed among various provinces as follows :—

Madras	12
Bombay	12
Bengal	13
United Provinces	12

Punjab	9
Bihar and Orissa	9
Central Provinces	5
Assam	3
Burma	4
Delhi	1

Of these 80 members 36 will represent general non-Muslim interests, 19 general Muslim interests, 1 general Sikh interests, 5 non-Muslim landholding interests, 4 Muslim landholding interests, 1 Sikh landholding interest, 6 European commerce and planting and 4 Indian commerce. To these will be added 14 members appointed by nomination and 26 officials. The committee hold that a system of direct election is not feasible, except in the cases of the landholding and commercial interests, and recommend that the general representatives should be returned by the non-official members of the provincial legislative councils voting on a communal basis.

It is proposed that the **Council of State** should consist of 56 members, exclusive of the Governor-General, of whom 24 should be

elected. The 24 elected seats are distributed as follows :—

General	11
Mahomedans	7
Sikhs	1
Landholders	2
European Chamber of Commerce	2
Burma	1

The elected members, with the exception of the two representatives of European, commerce, will be returned by the non-official members of the various provincial councils, the distribution of seats among the provinces being as follows :

Madras	3
Bombay	3
Bengal	3½*
United Provinces	3
Punjab	3
Bihar and Orissa	2½*
Central Provinces	1½†
Assam	1½†

* One landholding seat to be filled alternately from Bengal and Bihar and Orissa.

† One Muhammadan seat to be filled alternately from the Central Provinces and Assam.

GOVERNMENT OF INDIA ON FRANCHISE.

The following is a brief summary of a Government of India despatch of April 23, 1919, giving Government's views on the proposals summarised above :—

The Government of India accept the Committee's recommendations with the following exceptions. They would not admit subjects of Native States as electors or candidates. The object to any franchise qualifications other than those based on property. They would enlarge the electorate proposed for Madras and reduce those for Bengal, United Provinces and Assam, and would reduce size of larger constituencies. They consider provision for representation of backward classes inadequate and propose considerable increase in some provinces. They see no need for special University constituencies and propose to re-examine proposals for landholding constituencies in

Madras, Punjab and Assam, and to re-distribute seats allotted to landholders of United Provinces. They accept proposals for Muslim representation except in Bengal where they would give Muslims 44 seats instead of 34, they propose tentatively to allot to non-Brahmans 30 out of 61 non-Muslim seats in Madras but without special electorate and consult Bombay Government regarding Mahrattas. They ask for further consideration of distribution of seats between town and country. In regard to Indian Legislature they agree generally as to size of both chambers but criticise the distribution of seats in Assembly with special reference to omission of urban representation and amount of representation proposed for landholders and European and Indian commerce. They would prefer system of direct election to Assembly but are prepared to accept indirect provided elections to Council of State are direct.

DIVISION OF FUNCTIONS.

The following is a summary of the Report of the Committee on Division of Functions :—

The report is in six sections. The important sections are no. II, which deals with provincial functions and relations between the provinces and the Government of India, no. III in which the transfer of functions and the powers of the Governor-in-Council in relation to transferred subjects are discussed, and nos. IV and V in which proposals regarding the Public Services and Finance respectively are put forward. Much of the report does not lend itself readily to summary being of a technical and complicated nature but the main proposals are :—

Section II.—The committee have prepared two lists showing (i) all-India subjects and (ii)

provincial subjects. Among the most important subjects proposed for inclusion in the all-India list are, naval, military and aerial matters, foreign relations and relations with native states railways (with certain exceptions), communications of military importance, posts and telegraphs, currency and coinage, sources of imperial revenue, law of status, property, civil rights, etc., commerce, shipping and major ports, criminal law, central police organisation and railway police, possession and use of arms, central institutions of scientific and industrial research, ecclesiastic administration and all-India services. In the provincial list the most important items are local self-government, medical administration and education, sanitation, education (with certain exceptions), provincial buildings, communications other

than those of military importance, light and feeder railways in certain cases, irrigation and canals, land revenue administration, agriculture, civil veterinary department, fisheries, co-operative societies, forests, excise, administration of justice, development of industries, police, prisons and reformatories, control of newspapers and presses, provincial borrowing.

The provincial subjects will be divided into reserved and transferred, and it is proposed that the powers of the Government of India in regard to provincial subjects should vary according to this division. The committee recommend that intervention in transferred subjects should be allowed only for two purposes, *viz.*—

(1) To safeguard the administration of all-India subjects.

(2) To decide questions arising between two or more provinces, failing agreement between the provinces concerned:

In respect, however, of certain special subjects they retain a certain power of control in the hands of the Government of India by making the subjects "provincial subject to Indian legislation." In the case of reserved subjects the committee recognise that no specific restrictions can be imposed on the Government of India's general powers of control but feel that the control should vary according as the subjects are administered by provincial governments as agents of the Government of India or as provincial functions properly so called. In respect of the former the Government of India's powers of control must remain absolute, but in regard to the latter they propose to secure that the Governor General in Council shall exercise his power of control with due regard to the purpose of the new Government of India Act.

Effect of the Proposals.—The general effect of the proposals will be to leave the provinces free to legislate on provincial subjects reserved and transferred, which are not specially made subject to Indian legislation, except in cases where the proposed Bills affect powers expressly reserved to the Government of India by statute, or amend any provision of certain specified all-India Acts, or amend any section of an Act which by the terms of the Act itself is specially protected. They also propose that the Governor shall have power to reserve for the consideration of the Governor-General provincial Bills, which appear to him to affect any matter specially committed to his charge, any all-India subject or the interests of any other province, and shall be required similarly to reserve Bills which affect the religion or religious rights and usages of any class, university Bills, Bills shifting boundaries of reserved and transferred subjects, and railway or tramway Bills.

Section III.—The committee preface their discussion of the transfer of subjects with a statement of reservations which accompanied the proposals of local Governments. The Madras Government were wholly opposed to any scheme involving dualism, the Governments of Bombay and the Punjab and the Chief Commissioner of Assam proposed alternative schemes involving no division of functions and the Chief

Commissioner of the Central Provinces desired a period of training before the introduction of the Report scheme. The most important subjects proposed for transfer are local self-government, medical administration and education, sanitation, education (with certain exceptions), provincial buildings, communications other than those of military importance, light and feeder railways and tramways (in certain cases), agriculture, civil veterinary department, fisheries (except in Assam), co-operative societies, forests in Bombay, Excise (except in Assam) subject to certain safeguards, and the development of industries. Mr. Couchman is unable to recommend the transfer of any subject in Madras as he feels that the proposals of the Franchise Committee will result in the return of a large majority of Brahmans, in whose hands the interests of the masses will not be safe.

Intervention of the Government.—The committee recommend that the Governor should be free to intervene in the administration of transferred subjects

(i) in defence of reserved subjects,

(ii) in defence of his special responsibilities under the instrument of instructions.

In cases of the former description if the Governor fails to get departments concerned to agree, he will himself decide the point in issue and will be empowered to call on the minister to resign in cases of necessity. If the case is an emergent one requiring immediate action, the Governor will be able to certify it as such, whereupon the Governor-in-Council will take action. Rules are suggested for regulating the relation between the two portions of the Government and defining the authority of the Governor. The gist of these is (1) each side is not to interfere unduly with the other, (2) the Governor shall decide which side has jurisdiction when that is in doubt, (3) the Governor shall see that all orders of the Governor-General-in-Council are carried out, (4) the Governor shall call joint meetings in cases where reserved and transferred departments are concerned and shall decide in cases of disagreement, (5) the Governor-in-Council can administer a transferred subject in an emergency in the absence of a minister.

In defence of his special responsibilities under the instrument of instructions the Governor should have similar powers. Draft clauses defining the Governor's special responsibilities are included in the report: the matters covered by them are the maintenance of peace and tranquillity and prevention of religious and racial conflict, the grant of monopolies or special privileges to private undertakings contrary to the public interests and unfair discrimination in commercial and industrial matters, the protection of the interests of the Anglo-Indian or Domiciled Community and of the public services, and the protection of the special educational interests of Muslims, religious institutions, and depressed and backward classes.

Public Services.—Section IV.—The committee recommend that the public services employed under provincial governments be classified into three divisions, namely, Indian,

provincial and subordinate. The chief criterion will be the appointing authority. The Indian services will be recruited according to methods laid down in statutory orders by the Secretary of State and appointments to these services will be made by the Secretary of State, who will also fix rates of pay, sanction all new appointments, and secure pensions by statutory orders under the new Government of India Bill. The committee recommend that statutory rules should provide that no orders affecting adversely emoluments or pensions shall be passed in regard to officers of all-India services in transferred departments without the concurrence of the Governor. As a special measure of protection in the case of the Indian Medical Service propose that the medical department is transferred, statutory orders should provide that the private practice of officers of the Indian Medical Service will be regulated only by the Secretary of State. They further recommend that the Governor should be charged with the protection of the public services and with the duty of seeing that no orders affecting adversely the pension or emoluments of any officer are passed before they have been considered by both parts of the government. Appeal against such orders should lie to the Government of India and Secretary of State and no officer of all-India service should be liable to dismissal except by order of the Secretary of State. Questions of promotion, posting and discipline of officers with duties in both reserved and transferred departments should be treated in the manner explained above in connection with the relations of Governor in Council and ministers.

Provincial Division: pending legislation which will regulate recruitment, training, discipline, and the general conditions of service of the provincial services it is proposed that the existing rules should *mutatis mutandis* be binding on ministers as regards transferred departments. In regard to pay, allowances, leave, etc., local Governments will be granted wide powers. In the matter of discipline the main features of the procedure proposed for all-India service should apply to existing member of provincial services. In case of future entrants all orders affecting emoluments and pensions, and orders of dismissal, should require the personal concurrence of the Governor.

Subordinate Division: the rights and privileges of present incumbents should be maintained by means of directions to the Governor in Council as regards reserved subjects and instructions to the Governor in respect of transferred subjects. So far as future entrants are concerned the Governor in Council and Governor and ministers must be left to regulate the entire working of the services.

In conclusion the committee suggest that as far as possible members of all-India services should be secured in the benefits of the conditions under which they were recruited. The principle that alterations shall not press hardly on members of the services should be formally recognised in the future.

Finance.—Section V.

Under this head the most important proposals are—

- (1) that a strong audit system independent of the Governor in Council and ministers be established and that audit reports be laid before provincial legislature;
- (2) that the provincial finance departments should be reserved and that in relation to transferred subjects the duties of the department should be to advise and criticise, final decision resting with the minister subject to assent of the Governor;
- (3) that a list of taxes which local Governments may impose without previous sanction of the Government of India should be included in a schedule to be provided for by rule;
- (4) that provincial governments should ordinarily borrow through the Government of India, but, subject to approval of that Government as to time and method of borrowing, should be free to borrow in Indian market in certain circumstances;
- (5) that subject to certain simple regulations provincial governments should be left to their own responsibility in the disposal of their balances;
- (6) that a schedule of municipal and local taxation should be prescribed by the Governor-General in Council and previous sanction should only be required in case of tax not included in schedule.

REMARKS BY GOVERNMENT.

The following is a summary of a Government of India Despatch of April 16, 1919, dealing with the report on the division of functions which is summarised above:—

The Government of India accept generally the lists of all-India and provincial subjects; changes proposed are for the most part additions to make lists more specific or complete. They also accept general principles for regulation of intervention by the Government of India in provincial subjects, while suggesting somewhat different procedure in matter of provincial legislation in interests of simplicity. Principal changes in this respect are: (1) to give Government of India right to legislate in provincial matters where uniformity is desirable instead of marking

transferred subjects as subject to Indian legislation, and (2) to give the Governor greater freedom in matter of reserving bills by omitting provision for compulsory reservation. Government of India also agree with committee as to Governor's powers of intervention in transferred subjects though they would vary slightly the procedure in emergency cases where minister is unable to accept Governor's decision; they generally approve proposals regarding rules of executive business and instrument of instructions, of which a draft is appended to despatch. They regard the list of transferred subjects as generally suitable but are unable to agree to transfer of higher education and development of industries.

DIVISION OF FUNCTIONS.

The following are the revised lists of All-India, Provincial and Transferred subjects, as proposed by the Government of India. The indented paragraphs are the Government of India's remarks :—

1. All questions connected with His Majesty's naval, military and air forces in India, including the Royal Indian Marine, volunteers, cadets, and armed forces other than military and armed police maintained by provincial Governments.

1a. Ordnance, munitions, censorship, compulsory purchases, requisitioning, prize courts, registration of mechanical transport, etc., for naval and military purposes.

2. External relations, including naturalisation and aliens.

3. Relations with Native States.

3a. Political charges.

3b. Regulation of ceremonial, including titles and others, precedence and darbars, and civil uniforms.

4. Any territory in British India other than provinces mentioned in the schedule.

The schedule will include the eight provinces to which the reform scheme applies.

4a. The Andaman and Nicobar Islands.

4b. Territorial changes other than intra-provincial, and declaration of laws.

5. Excluded areas (This entry is included provisionally and subject to any recommendations for the treatment of those areas which may be made in a subsequent despatch).

These are the backward areas referred to in paragraph 199 of the Joint Report which it is suggested should be administered by the Governor under the control of the Government of India.

6. Communications—to the extent described under the following heads :—

(a) Railways and tramways, except (i) tramways with municipal areas and (ii) light and feeder railways and tramways.

(b) Such roads, bridges, ferries, tunnels, ropeways, causeways, and other means of communication as are declared by the Governor-General-in-Council to be of military importance.

(c) Aircraft, aircraft factories, aerodromes and landing places.

(d) Inland waterways, to an extent to be declared by the Governor-General-in-Council.

7. Shipping and Navigation (including shipping and navigation on inland waterways in so far as declared by the Governor-General-in-Council under 6 (d)).

It is suggested that wide powers should be delegated to local Governments to enable them to regulate local shipping traffic, *e.g.*, coasting vessels plying between ports in the same province, especially as regards accommodation provided for passengers.

8. Lightships, beacons, buoys and light-houses (including their approaches).

9. Port quarantine and marine hospitals.

10. Ports declared to be major ports by the Governor-General-in-Council.

11. Posts, telegraphs and telephones and wireless installations.

12. Sources of imperial revenue, including customs, cotton excise duties, taxes on income, salt, stamps (non-judicial).

13. Currency and coinage.

14. Public debt of India.

15. Savings banks.

16. Department of the Comptroller and Auditor-General.

17. Civil Law, including laws regarding status, property, civil rights and liabilities and civil procedure.

18. Commerce, including banking and insurance.

19. Trading companies and other associations.

19a. Regulation of food supply, fodder, fuel and trade generally between provinces in times of scarcity.

20. Control of production, supply and distribution of any articles in respect of which control by a central authority is declared by the Governor-General-in-Council essential in the public interests.

20a. Control of cultivation and manufacture of opium and sales of opium for export.

20b. Stores and Stationery.

Subject to the introduction as soon as possible of such measures of decentralization as are found by the Governor-General in Council to be advisable.

21. Control of petroleum and explosives.

The law regarding petroleum and explosives is at present under the direct control of the Government of India and uniformity of law and administration is desirable.

22. Geological survey.

22a. The development of industries including industrial research.

Vide 24, Provincial. The fact that the development of any industry or any industrial research is being taken up by the Government of India will not prevent local Governments from also taking it up.

23. Control of mineral development, in so far as such control is reserved to the Governor-General in Council under rules made or sanctioned by the Secretary of State, and regulation of mines.

The rules regulating the grant of licenses to prospect for minerals and the grant of leases of mines and minerals are made by the Governor-General in Council and sanctioned by the Secretary of State in Council.

Mining administration is now controlled by the Government of India and there is a small expert department of Inspectors working freely all over India. It would be impossible without great extravagance and loss of efficiency for each province to have its own expert staff.

24. Inventions and designs.

25. Copyrights.

26. Emigration and immigration and inter-provincial migration.

It is considered desirable to make inter-provincial migration an All-India subject to be administered by the provincial Governments as agents.

26a. Pilgrimages beyond British India.

27. Criminal Law, including criminal procedure.

The insertion of penal clauses in a provincial Bill will not bring the Bill within the scope of this entry.

27a. State prisoners.

28. Central police organization and railway police so far as jurisdiction and cost are concerned.

29. Control of possession and use of arms.

30. Central agency for medical research and central institutions of scientific and industrial research, including observatories, and central institutions for professional or technical training.

30a. Government of India records and the Imperial Library.

30b. Government of India buildings.

31. Ecclesiastical administration.

The expenditure is incurred entirely by the Government of India. The Bishops and clergy are under the administrative control of the local Governments, except that the Bishop of Calcutta, as Metropolitan, is under the control of the Government of India. As a large portion of the expenditure is on behalf of the army, the subject must be an All-India one.

31a. Higher language examinations to an extent to be declared by the Governor-General in Council.

32. Survey of India.

33. Archæology.

Provisionally included : *vide* para. 39 of the despatch.

34. Zoological survey.

35. Meteorology.

36. Census and Statistics.

37. All-India Services.

37a. Government servants' conduct rules.

38. Legislation in regard to any provincial subject, in so far as such subject is stated in the Provincial List to be subject to Indian legislation, and any powers relating to each

subject reserved by legislation to the Governor-General in Council.

39. All matters expressly excepted from inclusion in the list of provincial subjects.

40. All other matters not included in the list of provincial subjects.

Provincial Subjects.—1. Local self-government, that is to say, matters relating to the constitution and powers of municipal corporations, improvement trusts, district boards, mining, boards of health and other local authorities established in the province for purposes of local self-government, exclusive of matters arising under the Cantonments Act.

2. Medical administration, including hospitals, dispensaries and asylums.

Legislation regarding the status and civil rights and liabilities of lunatics is an all-India subject. The question of medical registration falls under head 42.

3. Public health and sanitation and vital statistics.

3a. Pilgrimages within British India.

4. Education, excluding—

(1) the Benares Hindu University and such other new universities as may be declared to be all-Indian by the Governor-General in Council.

(2) Chiefs' colleges and any educational institutions maintained by the Government of India ; subject to Indian legislation,

(a) controlling the establishment, and regulating the constitutions and functions of new universities ; and

(b) defining the jurisdiction of any university outside its own province ;

and, in the case of Bengal, up till the time when the recommendations of the first statutory commission are carried into effect, subject to Indian legislation with regard to the Calcutta University and the control and organisation of secondary education. (*Vide* paragraph 58 of fourth despatch.) If higher education is reserved there will be less need for this provision.

5. Public Works included under the following heads :—

(a) Provincial buildings ;

(b) Roads, bridges, ferries, tunnels, ropeways, causeways, and other means of communication other than such as are declared by the Governor-General in Council to be of military importance ;

(c) Tramways within municipal areas ;

(d) Light and feeder railways and tramways.

6. Control of water supplies in rivers, streams and lakes, irrigation and canals, drainage and embankments, water storage and water power, subject to such rules in regard to technical scrutiny and financial sanction as may be prescribed.

7. Land Revenue administration, as described under the following heads :—

(a) Assessment and collection of land revenue ;

(b) Maintenance of land records, survey for revenue purposes, records of rights ;

(c) Laws regarding land tenures, relations of landlords and tenants, collection of rent ;

(d) Court of Wards, encumbered and attached estates ;

(e) Land improvement and agricultural loans ;

(f) Colonization and disposal of Crown lands and alienation of land revenue.

Vide para. 61 of the fourth despatch.

7a. Management of State properties.

8. Famine relief.

9. Agriculture, including research institutes, experimental and demonstration farms, introduction of improved methods, provision for agricultural education, protection against destructive insects and pests and prevention of plant diseases.

10. Civil Veterinary Department, including provision for veterinary training, improvement of stock, and prevention of animal diseases.

11. Fisheries.

12. Co-operative Societies.

13. Forests, including preservation of game therein.

14. Land acquisition, subject to Indian legislation as regards acquisition of land for public purposes.

15. Excise, that is to say, the control of production, manufacture, possession, transport, purchase and sale of alcoholic liquor and intoxicating drugs, and the levying of excise duties and license fees on or in relation to such articles, but excluding, in the case of opium, control of cultivation, manufacture and sale for export.

16. Administration of justice, including the constitution, maintenance and organization of courts of justice in the province, both of civil and criminal jurisdiction, other than a High Court, a Chief Court, or the Court of a Judicial Commissioner, but subject to Indian legislation as regard courts of criminal jurisdiction.

17. Provincial law reports.

18. Administrator-General and Official Trustee, subject to Indian legislation.

19. Judicial stamps, subject to Indian legislation.

20. Registration of deeds and documents.

21. Registration of births, deaths and marriages.

Existing Indian legislation provides for the following classes, *viz.*, members of every race, sect or tribe to which the Indian Succession Act, 1865, applies, and all persons professing the Christian religion.

22. Religious and charitable endowments.

This entry is provisional on the contemplated Indian Act on this subject being secured from alteration by rules under the proposed section 79 (3) (i) of the Government of India Act.

23. Development of mineral resources which are Government property, subject to rules made or sanctioned by the Secretary of State, but not including the regulation of mines.

24. Development of industries, including industrial research.

Vide 22a. All-India.

25. Industrial matters included under the following heads :—

(a) Factories ;

(b) Settlement of labour disputes ;

(c) Electricity ;

(d) Boilers ;

(e) Gas.

Inspectors of Factories, Electricity and Boilers are provincial officers under the control of the local Governments, but we consider that there are strong grounds for maintaining uniformity in regard to the four matters which are made subject to Indian legislation. As regards the other subjects, especially those included under "Welfare of labour," it is desirable to give the provinces freedom of initiative.

(f) Smoke nuisances ; and

(g) Welfare of labour, including provident funds, industrial insurance (general, health and accident) and housing : subject as to (a), (b), (c) and (d) to Indian legislation.

26. Adulteration of food-stuffs and other articles.

27. Weights and measures.

28. Ports, except such ports as may be declared by the Governor-General-in-Council to be major ports.

29. Inland waterways, including shipping and navigation thereon so far as not declared by the Governor-General-in-Council to be under control of the Government of India, but subject as regards inland steam vessels to Inland legislation.

30. Police, other than the jurisdiction and cost of railway police.

31. Miscellaneous matters :—

(a) regulation of betting and gambling ;

(b) prevention of cruelty to animals ;

(c) protection of wild birds and animals ;

(d) control of poisons, subject to Indian legislation ;

(e) control of motor vehicles, subject to Indian legislation as regards licenses valid throughout British India ; and

(f) control of dramatic performances, and cinematographs, subject in the case of the latter to Indian legislation in regard to certification.

32. Control of newspapers, books and printing presses, subject to Indian legislation.

33. Coroners.
34. Criminal tribes, subject to Indian legislation.
35. European vagrancy, subject to Indian legislation.
36. Prisons, prisoners and reformatories, subject to Indian legislation.
37. Pounds and cattle-trespass.
38. Treasure trove.
39. Museums (except the Indian Museum, Imperial War Museum and the Victoria Memorial, Calcutta), and zoological gardens.
- 39a. Provincial records and libraries.
- 39b. European cemeteries and historical monuments and memorials.
40. Government Press.
41. Franchise and elections for Indian and provincial legislatures.

Vide para. 76 of fourth despatch, and para. 2 of fifth despatch.

42. Regulation of medical and other professional qualifications and standards, subject to Indian legislation and provision for medical education.

Under this head will fall the administration of the existing provincial Medical Registration Acts. Power is reserved to the Indian legislature in order to secure uniformity and maintain the standards of professional qualifications.

43. Control of the public services, other than the All-Indian services serving within the province, subject to Indian legislation.

44. Sources of provincial taxation not included under previous heads, whether (a) taxes included in the schedule of additional provincial taxes or (b) taxes outside this schedule in the case of which the prior sanction of the Governor-General-in-Council has been obtained to the necessary legislation.

45. Borrowing of money on the sole credit of the province subject to such rules as are made by the Secretary of State in Council.

46. Any matter which, though falling within an all-India subject, is declared by the Governor-General-in-Council to be of a merely local or private nature within the province.

Provincial Subjects for Transfer.—The list of provincial subjects for transfer is as follows, the indented paragraphs being the Government of India's remarks:—

IN ALL PROVINCES.

Local self-government, that is to say, matters relating to the constitution and powers of municipal corporations, improvement trusts, district boards, mining, boards of health and other local authorities established in the province for purposes of local self-government exclusive of matters arising under the Cantonments Act.

The question of control, if any, to be exercised over policemen or watchmen by local authorities should be left to be determined

by provincial legislation relating to local self-government.

Pounds, where they are managed by local authorities, will come under local self-government.

Medical administration, including hospitals, dispensaries and asylums.

It will be noted that it is proposed to reserve "Regulation of medical and other professional qualifications and standards," and to make this matter subject to Indian legislation (*vide* Provincial List, item 42). The administration of the Medical Registration Acts will thus be reserved, and the power of securing uniformity of standards will remain with the Indian legislature.

Public health and sanitation of vital statistics. Port quarantine and marine hospitals, is an all-India subject.

The Sanitary Department will be responsible for the compilation of vital statistics, but at present in most provinces will have to rely on the services of other departments for their collection.

Pilgrimages within British India.

Primary and middle vernacular education.

It is suggested that the Governor shall be required to have special regard to certain interests in education (*vide* paragraph 67).

IN ALL PROVINCES EXCEPT ASSAM.

Public Works included under the following heads:—

- (a) Provincial buildings connected with transferred departments:

- (b) Roads, bridges, ferries, tunnels, ropeways, causeways and other means of communication other than such as are declared by the Governor-General-in-Council to be of military importance;

- (c) Tramways within municipal areas.

IN ALL PROVINCES.

Agriculture, including research institutes, experimental and demonstration farms, introduction of improved methods, provision for agricultural education, protection against destructive insects and pests and prevention of plant diseases.

Civil Veterinary Department, including provision for veterinary training, improvement of stock and prevention of animal diseases.

IN ALL PROVINCES EXCEPT ASSAM.

Fisheries.

In Assam the restrictive measures taken for the protection of fish have been unpopular, and the administration of fisheries is closely connected with the Land Revenue Department.

IN ALL PROVINCES.

Co-operative Societies.

IN BOMBAY ONLY.

Forests, including preservation of game therein.

The existing powers of the Governor-General in-Council under the Forest Act will remain,

and any provincial legislation affecting them will be subject to previous sanction.

IN ALL PROVINCES EXCEPT ASSAM.

Excise, that is to say, the control of production, manufacture, possession, transport, purchase and sale of alcoholic liquor and intoxicating drugs, and the levying of excise duties and license fees on or in relation to such articles, but excluding, in the case of opium, control of cultivation, manufacture and sale for export.

With reference to the proposed restriction of the purposes for which the Government of India will exercise their power to intervene in transferred subjects (*vide* para. 4 of the despatch), the following points affecting Excise require special mention :—

(1) The power of the Government of India to safeguard the administration of customs revenue will involve power to control the incidence of excise revenue: (i) on any liquor which is likely to compete directly with imported liquor; and (ii) on any article imported into British India which is liable on importation to the payment of customs duty.

(2) With regard to provincial action restricting the introduction into a province of excisable articles the position will be as follows:—

The Government of India will be entitled to intervene, in the case of excisable article imported from outside British India, to protect their custom duties, and, in the case of excisable articles in transit from or to other provinces, territories and States of India, for the purpose of protecting the interests of such other provinces, territories or States.

(3) The Government of India will be entitled to intervene in matters affecting the supply of excisable articles to His Majesty's forces.

In Madras and Bombay, Excise, Salt and Customs are dealt with under a unified system of administration. Salt and Customs are all-India subjects, and the question of making arrangements for the separate administration of these subjects when the transfer of Excise takes effect will be considered by the Government of India.

IN ALL PROVINCES.

Registration of deeds and documents.

Registration of births, deaths and marriages.

Vide note to item 21, provincial list.

Religious and charitable endowments.

Adulteration of foodstuffs and other articles.

Weights and measures.

Museums (except the Indian Museum, the Imperial War Museum and the Victoria Memorial, Calcutta) and Zoological gardens.

WORK OF JOINT SELECT COMMITTEE.

The reference of the Government of India Bill to a Select Committee of both Houses, recommended in the course of the second reading debate in the House of Commons by the Secretary of State, was formally made in both Chambers early in July, 1919, and after discussing procedure in private and hearing a statement from the India Office, the Committee held their first public sitting on 16th July. The selection for the chairmanship of so strong and impartial a peer as the Earl of Selborne was generally approved, and though criticisms were heard from some quarters of the presence on the Committee of both Mr. Montagu and his Parliamentary Lieutenant, Lord Sinha, questions addressed to the Speaker showed that the presence of two Ministers on such a committee though unusual was not without precedent. The other members of the Committee—7 being chosen from each House—were the Duke of Northumberland, the Marquess of Crewe, Viscount Midleton, Lord Islington, Lord Sydenham, Mr. T. J. Bennett, Sir Henry Craik, Major Ormsby-Gore, Sir D. Maclean, Sir J. D. Rees, and Mr. Ben Spoor. Sir Donald Maclean subsequently resigned and his place was taken by Mr. F. D. Acland.

The Committee pursued their task with great assiduity, receiving and acting upon the

special authority of both Houses to sit during the summer recess. Many Indian deputations went to London to lay documents before the Committee and tender evidence. In all 70 witnesses were heard, sometimes in groups of two or three at a time, but usually separately, and the Minutes of Evidence extend to 581 closely printed foolscap pages. The work of public examination ended on October 15, and the subsequent private deliberations, suspended on two occasions for preparing or revising the draft report, ended on 17th November. The Report was issued two days later, as a White paper, accompanied by the Bill as amended and Vols. II and III, (Minutes of Evidence, Appendices, No. 203).

Immense importance attaches to the Report, for since the Bill can be little more than a framework if there is to be due flexibility and adaptation in the new Indian constitution, it may be regarded as an integral part of India's new Charter. The extent to which the recommendations and interpretations are accepted will form an authoritative standard of the intentions of Parliament in regard to the details and practical working of the new Constitution. They resolve doubts, real or merely argumentative, as to the policy of Parliament, and by including the limiting as well as the

operative sentences of the pronouncement of 20th August, 1917, in the preamble to the Bill, they demonstrate that the responsibility for deciding the further stages in the journey India has been started upon rests on Parliament alone, "and that it cannot share this responsibility with, much less delegate it to, the newly elected legislatures of India."

The recommendations and accompanying revised Bill were received in the most diverse quarters as marking distinct improvements on the measure as read a second time in the Commons. Their general effect is to simplify the machinery, while materially enlarging the

reality, of this first instalment towards the goal of giving India an autonomous system comparable with those possessed by the self-governing Dominions. They also develop the ideal of fixing responsibility where it actually resides, instead of covering it up by elaborate devices. Stress is laid upon the importance of the Governor fostering in every way free consultation between the two halves of his Government without obscuring their separate distinctive responsibilities. In many ways the dangers of friction and deadlock arising from the original scheme are mitigated, while the reality of growing degrees of autonomy is more clearly defined.

SUMMARY OF THE REPORT.

The main recommendations of the Committee's report were officially summarised as follows:—

(1) The Committee endorse the general scheme of the Bill as an accurate interpretation of the announcement of the 20th of August, 1917, and are of the opinion, after considering all the suggested alternatives, that the partition of the domain of provincial government into two fields, with the consequent division of responsibility, is the best way of giving effect to the spirit of the declared policy of Government.

(2) While laying great stress on the necessity of clearly demarcating and fixing the responsibility of each half of the executive for its own sphere, the Committee regard it as of the highest importance that the Governor should foster the habit of free consultation between both halves and that he should insist upon it in all important matters of common interest.

(3) The Committee believe that the revised Bill secures to the Governor-in-Council on the one hand, and to the Government of India on the other, the possession of unquestioned means of discharging their respective responsibilities to Parliament, the maintenance of which, except in so far as they are released from that responsibility by the changes made under the Bill, the Committee regard as an essential feature of the policy of His Majesty's Government.

(4) The Committee recommend the immediate constitution of a Standing Joint Committee of both Houses for the purpose of securing closer Parliamentary touch with Indian affairs. One of the most important points on which consultation with this Committee will be required is for the examination of draft rules under the Bill and for the examination of the first rules. They recommend that the present Committee should be re-appointed.

(5) The scheme of the Bill, which leaves much to be carried out by rules, is endorsed as necessary and right. From this point the order of the recommendations follows for the most part the arrangement of the revised Bill. The whole of the announcement is included in

the preamble in order to dissipate doubts as to the authority of the different parts.

(6) **Functions Committees.**—The lists of subjects as revised after consultation at the India Office and put in as evidence by Mr. Feetham are accepted. This involves the recommendation that the whole of education subject to reservations about Universities and the development of industries, should be transferred subjects.

(7) **Rules for Allocation of Revenue** between the two halves of Government.—The Committee do not endorse the suggested separation of the sources of revenue, but recommend that the Governor be empowered if the joint purse is found to produce friction at any time to make an allocation of a definite proportion of the revenue and balances to continue in force for at least the whole life of the existing Legislative Council. If the Governor requires assistance in making the allocations, he should be allowed at his discretion to refer the matter for decision to an authority to be appointed by the Governor-General. Until a mutual agreement between both halves of the Government has been reached, or until the allocation has been made by the Governor, the total provision of the different heads of expenditure in the provincial budgets of the preceding financial year is to hold good.

(8) There is no cause at present for disturbing the existing relations between the Local Government of India and the Secretary of State. The question whether and in what manner Local Governments should correspond with the Secretary of State should be left to the latter to decide. Now intervention by the Government of India in provincial matters will require a corresponding change in the Secretary of State's control. India is not yet ripe for a Federal system, and while an extensive delegation to the Provincial Governments of some of the powers and duties now in the hands of the Government of India is essential, the Central Government cannot be relegated to the functions of mere inspection and advice.

(9) **Relations of Governor and Ministers.**—Ministers will have the option of resigning if their advice is not accepted by the Governor, and the Governor will have the right of dismiss-

ing a Minister whose policy he believes to be seriously wrong, or out of accord with the views of the Legislature. If the Governor resorts to dissolution to find new Ministers, the Committee hope that he will be able to accept the view of the new Ministers regarding the issue which forced the dissolution. The Ministers will certainly be at least two in number in every province, and the fact that they undoubtedly will act together has been recognised and provided for as a desirable position. The Governor should never hesitate to point out to his Ministers what he thinks is the right course, or to warn them if he thinks their proposed course is wrong, but if the Ministers decide not to adopt his advice the Governor should ordinarily allow the Ministers to have their way. Mistakes will doubtless follow but they will bring experience. The status of Ministers should be similar to that of a member of the Executive Council.

(10) Normally the Executive Council is expected to consist of two members. If in any case the Council includes two members of the Civil Service, neither of whom is an Indian, the Committee think it should also include two non-official Indians.

(11) **Franchise Recommendations.**—The following recommendations relate to the Franchise Reports :—

(a) The Government of India to adjust the allocation of seats so as to secure a larger representation of the rural population, as distinct from the urban and a better representation of the urban wage-earning classes, and an effort should be made to remedy as far as possible the disparity between the size of the electorates in the different provinces. The adjustment, however, must in all cases be by increasing and not by diminishing, the representation already proposed by the Southborough Report.

(b) **Depressed Classes.**—The Government of India should be instructed after consultation with the Local Governments to provide a larger share of real representation by nomination, having regard to the number in each province, to increase and not to diminish the general electorate, and the nominees are to be taken if suitable, and if not otherwise available from the ranks of the public services, without thereby increasing the prescribed ratio of official members.

(c) The non-Brahmins in Madras must be provided with separate representation by means of the reservation of seats. The Brahmins and non-Brahmins to be invited to settle the number of seats to be reserved and the method of reservation, and failing an agreement a decision to be made by an arbitrator appointed by the Government of India.

(d) The Mahrattas in Bombay are recommended for a similar treatment.

(e) The Electoral Rules to be so framed that if any Provincial Legislative Council decides by a resolution in favour of women's franchise, women should be put on the register of that province.

(f) With the one exception named in the preceding head the franchise not to be altered for the first ten years and Legislative Councils to be unable to make alterations.

(g) The special representation of landholders in the provinces to be reconsidered by the Government of India in consultation with the local Governments.

(h) The franchise for University seats to be extended to all graduates of over seven years' standing.

(i) European representation is accepted except for Bengal. The Government of India should consider with the Bengal Government its readjustment in that province.

(j) The eligibility of the rules and subjects of Native States to vote or stand for election to be settled for each province by the local Government.

(k) Dismissal from Government service not to be a disqualification for election, but a criminal conviction involving a sentence of more than six months' imprisonment to disqualify for five years from the date of the expiry of the sentence.

(l) The Franchise Committee's proposal for a residential qualification and the maintenance of the Lucknow Compact is endorsed.

(m) The Committee advise the full exploration of the principle of proportional representation with a view to its consideration by a Statutory Commission.

(n) A complete and stringent Corrupt Practices Act to be passed and brought into operation before the first elections.

(12) Great importance is attached to the question of the selection of the first Presidents of the Legislative Councils and to the necessity of imbuing the Councils from the start with the spirit and convention of Parliamentary procedure.

(13) **Voting the Provincial Budget.**—When the Council reduce, or fail to vote a Budget demand, for a transferred subject, the Committee consider the Governor will be justified if so advised by his Ministers, in re-submitting the vote to the Council for the purpose of reviewing the decision. The Governor's power of the restoration of reduced reserved votes must be regarded as real and its exercise is not arbitrary. All proposals for taxation should be considered and agreed upon by both halves of the Government before submission to the Legislative Council.

(14) The Committee reject the **Grand Committee Procedure** as failing in a crisis to secure the object in view and as perpetuating the disadvantages of the official *blon*. The responsibility for reserved legislation is with the Governor-in-Council, and no advantage is gained by attempting to conceal this. The Governor's power is to be exercised only after opportunity for full discussion in the Legislature, and the Standing Committee of Parliament should be specially consulted on acts of this kind by the Secretary of State.

(15) **Indian Legislature.**—The scheme of the Report and the original Bill for the operation of the Council of State is rejected for much the same reason as is the Grand Committee. The Council of State is to be constituted as a true revising Chamber from the start. The Franchise Committee's proposal for election to the Council of State is rejected, and Government is to be instructed to propose a different system immediately to be elaborated before the inauguration of the new constitution of the Legislative Assembly. The views in paragraph 39 of the Franchise Despatch are endorsed, and the Government of India is to be instructed to propose a better scheme of election at the earliest possible moment.

(16) The first President of the Legislative Assembly should be qualified by experience of the House of Commons and knowledge of Parliamentary procedure and should be chosen with a view to the influence which he may be expected to exert on the whole of Parliamentary procedure in India.

(17) The voting of the Indian Budget is not introduced as establishing any measure of responsible Government in the Central Administration, and the power of the Governor-General to disregard adverse votes is to be understood to be real and intended to be used if and when necessary. The clause is passed on the understanding that the Assembly will be reasonably representative in character and directly elected.

(18) The Committee recommend that in future not less than three members of the Governor-General's Executive Council should be Indians.

(19) All costs of the **India Office** not being agency charges should be placed on the British estimates.

(20) The Council of India is retained without change in its statutory position with all its advantages of tradition and authority, but a re-adjustment of work is desirable so as to provide a less rigid procedure and to enable the introduction of the portfolio system to be made. More Indians should be introduced, and the period of tenure of office should be reduced to five years with this object in view and in order to secure a continual flow of fresh experience from India.

(21) No statutory change in the relations between the Government of India and the Secretary of State is possible so long as the former remains wholly responsible to Parliament but the conventions governing these relations may be wisely modified to meet the fresh circumstances caused by a large elected majority in the Legislative Assembly. Thus the Secretary of State, in the exercise of his responsibility to Parliament, which he cannot delegate, may reasonably consider that only in exceptional circumstances should he be called on to intervene in matters of purely Indian interest in which the Government of India and the Indian Legislature are in agreement. A particular instance of this convention would be tariff arrangements. Fiscal autonomy cannot be guaranteed by Statute without the unconstitutional result of limiting the ultimate control by Parliament of the Crown's power of veto. It can only be assured by the acknowledgment of a convention that the Secretary of State should so far as possible, abstain from intervention in fiscal

matters when the Government of India and the Indian Legislature agree and should only intervene to safeguard the international obligations of the Empire or any fiscal arrangements within the Empire to which His Majesty's Government is a party. The relations between the Secretary of State and the local Governments as regards intervention in respect of reserved subjects of purely provincial interest should be governed by similar principles. Over transferred provincial subjects the control of the Government of India and of the Secretary of State should be confined to the limits defined under clause 13 of the Bill.

22. The **Public Services** changes made in part 14 of the Bill indicate generally the Committee's views on this matter. If there are members of a service whose doubts as to the changes to be made are so deeply rooted that they feel they cannot usefully endeavour to take part, the Committee think it would be fair if possible to offer them an equivalent career elsewhere or, as a last resort, that they should be allowed to retire on such pension as the Secretary of State may consider suitable to the length of service.

23. The appointment of a **Statutory Commission** at the end of ten years is endorsed. The Commission should include the Government of India in the scope of the enquiry, and consider generally what further advance can be made. Meanwhile no substantive changes should be introduced.

24. The Committee do not advise the inclusion of **Burma** in the scope of the scheme, and while not doubting that the Burmese have deserved and should receive an analogous Constitution, they are impressed with the essential differences between Burma and India.

25. The institution of **Standing Committees** as a general rule in Provinces is strongly recommended, and in such departments of the Government of India as the Governor-General may decide.

26. The principles governing the revision of assessment of **Land Revenue** should be brought under closer regulation by statute as soon as possible as part of a general policy, bringing within the purview of legislation the imposition of new burdens.

27. Importance is attached to Sir Michae Sadler's recommendations of **Education Boards** and the Committee hope that Ministers will see their way to constitute them from the outset. The advisability of creating Local Government departments in every Province is also commended to Ministers.

The policy endorsed in paragraph 326 of the Joint Report is strongly endorsed. In conclusion the Committee repudiate any suggestion that the changes made by the Bill imply any condemnation of the present system of Government in India. The present form of Government arises out of the fact that Parliament has held the Government of India responsible to itself for every action; and that there has hitherto been no constitutional self-Government effort. The welfare of the masses of the peoples of India has everywhere and always been the spirit of Government.

THE BILL PASSED.

The Bill, as amended by the Committee, was introduced in the House of Commons without delay and became law, with several slight alterations as the result of criticisms made during the course of the debate, before Parliament was prorogued. In the speech from the throne at the time of the prorogation His Majesty referred to the measure in the following terms:—"A measure which marks the first stage in the development of responsible

government in India has become law, and I rely on all My Subjects to work together for its success. In a Proclamation which I am addressing to My Viceroy and to the Princes and People of India, I am expressing My hope that harmonious political life will be steadily built up on the foundations thus laid, and I am announcing My intention of sending My Son, the Prince of Wales, to India to inaugurate the new Constitution."

THE ROYAL PROCLAMATION.

His Majesty was at the same time pleased to cause the following Proclamation to be issued with the signification of the Royal Assent to the Government of India Act, 1919 :

GEORGE THE FIFTH, By the Grace of God of the United Kingdom of Great Britain and Ireland, and of the British Dominions beyond the Seas, King, Defender of the Faith, Emperor of India.

To My Viceroy and Governor-General, to the Princes of the Indian States, and to all My subjects in India, of whatsoever race or creed, Greeting.

1. Another epoch has been reached to-day in the annals of India. I have given My Royal Assent to an Act which will take its place among the great historic measures passed by the Parliament of this Realm for the better government of India and the greater contentment of her people. The Acts of 1773 and 1784 were designed to establish a regular system of administration and justice under the Honourable East India Company. The Act of 1833 opened the door for Indians to public office and employment. The Act of 1858 transferred the administration from the Company to the Crown, and laid the foundations of the public life which exists in India to-day. The Act of 1861 sowed the seed of representative institutions, and the seed was quickened into life by the Act of 1909. The Act which has now become law entrusts elected representatives of the people with a definite share in the government and points the way to full responsible government hereafter. If, as I confidently hope, the policy which this Act inaugurates should achieve its purpose, the results will be momentous in the story of human progress ; and it is timely and fitting that I should invite you to-day to consider the past and to join me in My hopes of the future.

2. Ever since the welfare of India was confided to Us, it has been held as a sacred trust by Our Royal House and Line. In 1858 Queen Victoria, of revered memory, solemnly declared Herself bound to Her Indian subjects by the same obligations of duty as to all Her other subjects ; and She assured to them religious freedom, and the equal and impartial protection of the Law. In His message to the Indian people in 1903, My dear Father, King Edward

VII, announced His determination to maintain unimpaired the same principles of humane and equitable administration. Again, in His Proclamation of 1908, He renewed the assurances which had been given 50 years before, and surveyed the progress which they had inspired. On My Accession to the Throne in 1910, I sent a message to the Princes and peoples of India, acknowledging their loyalty and their homage, and promising that the prosperity and happiness of India should always be to Me of the highest interest and concern. In the following year I visited India with the Queen-Empress and testified My sympathy for her people and My desire for their wellbeing.

3. While these are the sentiments of affection and devotion by which I and My predecessors have been animated, the Parliament and the people of this Realm and My officers in India have been equally zealous for the moral advancement of India. We have endeavoured to give to her people the many blessings which Providence has bestowed upon ourselves. But there is one gift which yet remains, and without which the progress of the country cannot be consummated—the right of a her people to direct her affairs and safeguard her interests. The defence of India against foreign aggression is a duty of common Imperial interest and pride. The control of her domestic concerns is a burden which India may legitimately aspire to take upon her own shoulders. The burden is too heavy to be borne in full until time and experience have brought the necessary strength ; but opportunity will now be given for experience to grow and for responsibility to increase with the capacity for its fulfilment.

4. I have watched with understanding and sympathy the growing desire of My Indian people for representative institutions. Starting from small beginnings, this ambition has steadily strengthened its hold upon the intelligence of the country. It has pursued its course along constitutional channels with sincerity and courage. It has survived the discredit which at times and in places lawless men sought to cast upon it by acts of violence committed under the guise of patriotism. It has been stirred to more vigorous life by the ideals for which the British Commonwealth fought in the Great War, and it claims support in the part which India has taken in our common struggles, anxieties and victories.

In truth, the desire after political responsibility has its source at the root of the British connexion with India. It has sprung inevitably from the deeper and wider studies of human thought and history which that connexion has opened to the Indian people. Without it the work of the British in India would have been incomplete. It was therefore with a wise judgment that the beginnings of representative institutions were laid many years ago. Their scope has been extended stage by stage until there now lies before us a definite step on the road to responsible government.

5. With the same sympathy and with redoubled interest I shall watch the progress along this road. The path will not be easy, and in the march towards the goal there will be need of perseverance and of mutual forbearance between all sections and races of My people in India. I am confident that those high qualities will be forthcoming. I rely on the new popular assemblies to interpret wisely the wishes of those whom they represent, and not to forget the interests of the masses who cannot yet be admitted to the Franchise. I rely on the leaders of the people, the Ministers of the future, to face responsibility and endure misrepresentation, to sacrifice much for the common interest of the State, remembering that true patriotism transcends party and communal boundaries; and while retaining the confidence of the legislatures to co-operate with My officers for the common good in sinking unessential differences and in maintaining the essential standards of a just and generous government. Equally do I rely upon My officers to respect their new colleagues and to work with them in harmony and kindness; to assist the people and their representatives in an orderly advance towards free institutions; and to find in these new tasks a fresh opportunity to fulfil, as in the past, their highest purpose of faithful service to My people.

6. It is My earnest desire at this time that, so far as possible, any trace of bitterness between My people and those who are responsible for My government should be obliterated. Let those who, in their eagerness for political

progress, have broken the law in the past respect it in the future. Let it become possible for those who are charged with the maintenance of peaceful and orderly government to forget the extravagances which they have had to curb. A new era is opening. Let it begin with a common determination among My people and My officers to work together for a common purpose. I therefore direct My Viceroy to exercise, in My name and on My behalf, My Royal clemency to political offenders, in the fullest measure which in his judgment is compatible with the public safety. I desire him to extend it, on this condition, to persons who, for offences against the State or under any special or emergency legislation, are suffering imprisonment or restrictions upon their liberty. I trust that this leniency will be justified by the future conduct of those whom it benefits, and that all My subjects will so demean themselves as to render it unnecessary to enforce the laws for such offences hereafter.

7. Simultaneously with the new constitution in British India, I have gladly assented to the establishment of a Chamber of Princes. I trust that its counsels may be fruitful of lasting good to the Princes and States themselves, may advance the interests which are common to her territories and to British India, and may be to the advantage of the Empire as a whole. I take the occasion again to assure the Princes of India of My determination ever to maintain unimpaired their privileges, rights and dignities.

8. It is My intention to send My dear son, the Prince of Wales, to India next winter to inaugurate on My behalf the new Chamber of Princes and the new constitution in British India. May he find mutual goodwill and confidence prevailing among those on whom will rest the future service of the country, so that success may crown their labours and progressive enlightenment attend their administration. And with all My people I pray to Almighty God that by His wisdom and under His guidance India may be led to greater prosperity and contentment, and may grow to the fullness of political freedom.

GEORGE, R. I.

The Indian National Congress.

The following record of the early work of the Congress is written by the Hon. Sir Dinsha Wacha:—The Congress was practically founded in 1885 by the late Mr. Allan Octavian Hume, a retired member of the Indian Civil Service, and the son of the distinguished Joseph Hume, M.P., whose radicalism is so well known and who was one of the chief advocates of Retrenchment and Reform in the House of Commons in the forties or fifties. Mr. Hume had a distinguished career in the service. In his younger days when Collector and Magistrate at Etawah, he had rendered invaluable service in quelling the Mutiny in its incipient stage. For this service he was created a Civil Companion of the Bath, a rare honour in those days for a young Anglo-Indian Civil Servant. He retired from the service in 1883 after having honourably filled several high offices, the last of which was the Home Secretaryship of the Government of India. The policy of Lord Lytton's Government (1876-80) had aroused discontent in the country. The imposition of the Vernacular Press Act, commonly known as the Black Act, and the uncalculated hostilities with the Amir Shere Ali of Afghanistan which culminated in the Second Afghan War were the subject of much adverse criticism among the most moderate but enlightened Indians in all parts of the country. It was recognised in all quarters that the people should organise themselves by way of a conference to ventilate their grievances. Correspondence was passing among the Indian leaders of thought in the different provinces as to the formation of such a conference on a sound and permanent footing. The viceroyalty of Lord Ripon (1880-84) gave the necessary stimulus and encouragement. Thus by 1883, when Mr. Hume retired, the idea of the Conference had so far taken body and form that, with the sympathetic support of Mr. Hume, a Union was established after he had in 1883 the genuine support of many sterling friends of India in Parliament, especially John Bright and Mr. Stagg. Mr. Hume had been a silent but watchful observer of events and felt that he must give his active support to the movement, his heart being fully prepared to ameliorate the social, economical and political condition of the Indians. He was in close communication with the leaders in various provinces. Here it may also be worth while recording the fact that during the preliminary stage of the inception of the Congress, Mr. Hume, who had retired to Simla, had had the opportunity of consulting Lord Dufferin on the subject and it is a fact that His Lordship was at one with the object and greatly encouraged Mr. Hume in his mission. Subsequently after 1888 His Lordship, for reasons of his own, which have never been authoritatively declared, chose to assume a hostile attitude towards the organisation but it was effectually met by the speech which Mr. George Yule made in December 1888 at the Congress of Allahabad.

First Session.

Progress was so far made as to formulate the programme of a first meeting in Poona which at the time was the seat of great political activity. The Christmas week of 1885 was resolved upon for the inauguration of the Con-

ference. Unfortunately, when the preparations were being made cholera broke out in the City of Poona and it was deemed unsafe to invite delegates there. Accordingly the seat of the first assembly was hurriedly transferred to Bombay under the auspices of the Bombay Presidency Association, with its then active honorary secretaries, Messrs. Pherozeshah M. Mehta, Kashinath Trimbuk Telang and Dinsha Edulji Wacha. It was at the same time resolved to christen it "The Indian National Congress," having regard to the fact that its principal aim was faithfully to echo the public opinion of all India. So many misleading statements were made during the earliest years of the Congress as to its aims and objects that it may be useful to relate what they are as laid down by Mr. Hume himself in a speech he made at Allahabad in 1888, on the eve of the session of the Fourth Congress at that centre. Firstly, he prefaced his enumeration of the objects by stating that "no movement in modern historical times has ever acquired, in so short a period, such an appreciable hold on the minds of India, none has ever promised such wide reaching and beneficent results." Further on, it was observed that "the Congress movement is only one outcome, though at the moment the most prominent and tangible, of the labours of a body of cultured men, mostly born natives of India, who some years ago banded themselves together to labour silently for the good of India." As to the fundamental principles of the Congress they are:—

Firstly, the fusion into one national whole of all the different and discordant elements that constitute the population of India;

Secondly, the gradual regeneration along all lines, mental, moral, social and political of the nation thus evolved; and,

Thirdly, the consolidation of union between England and India by securing the modification of such of the conditions as may be unjust or injurious to the latter country.

The Split.

It was on the fundamental principles above stated that the Congress carried out its appointed work midst much misrepresentation, obloquy and even abuse, till 1907 when an extreme faction of delegates deliberately chose to raise a split in the united camp. At the Congress held in Surat in that year the session had to be abandoned owing to the violent outbreak of the factional spirit of those who since have been known as "Extremists," in contrast with the overwhelming majority of those entertaining sober views who are called "Moderates;" but if the proceedings were for the time abandoned, it was not without the leading men immediately organising themselves on the spot to take ways and means for the holding of future congresses and for the purpose of framing a written constitution of which the most important part was the creed of the Congress. In other words, the unwritten aims and objects of the Congress were reduced to writing in a crystallised form. As such it may be repeated here, as it should dispel all doubts, misgivings or misunderstandings of the true aims and objects of the Congress.

"The objects of the Indian National Congress are the attainment by the people of India of a system of Government similar to that enjoyed by the self-governing members of the British Empire, and a participation by them in the rights and responsibilities of the Empire on equal terms with those members. These objects are to be achieved by constitutional means by bringing about a steady reform of the existing system of administration and by promoting national unity, fostering public spirit and developing and organising the intellectual, moral, economic and industrial resources of the country."

Every delegate to the National Congress is obliged by the Congress Committee of the province from which he is sent to express in writing his acceptances of the above creed and his willingness to abide by the Constitution and the rules framed under it.

This Constitution has been in full working order since 1908. It is unalterable save by a Resolution of a majority in Congress assembled. It provides a guiding or directing staff of chosen leaders selected by each province and annually confirmed from the platform of the Congress by the President, Ex-Presidents, Secretaries and other office-bearers are nominated *ex-officio* members and the whole Committee is known by the name of the All India Congress Committee. The provinces are the same as the territorial divisions of the Government of India. The Committee of each Province is called the Provincial Congress Committee on whom devolves the duty, under the constitution and the rules, of calling meetings for the election of delegates, suggesting subjects to be brought forward for the consideration of the Congress and all cognate matters. The Congress declares each year at the close of the session where the next Congress is to be held. The town or city where it is to be held begins to make all preparations fully six months before the date of the holding of the session which has hitherto invariably been during the three days immediately succeeding Christmas Day. That period is specially selected owing to the great convenience it affords to all classes of delegates in the country to attend—a convenience not offered at any other time during a year. A Reception Committee is formed with a leading person as its Chairman. That Committee divides its work among various sub-committees such as finance, correspondence, housing, feeding and so on. A band of active young persons volunteer to serve the different sub-committees. Formerly they were chiefly selected from among the student class but owing to the orders of Government in the Education Department, that students should take no active part in politics, volunteers are now wholly recruited from the circle of men of business or profession. Apart from the delegates who generally number from 500 as a minimum to 1,000 or so as a maximum there is always a large number of visitors. So that the pandal is erected to contain at least 5,000 seats. There have been some notable Congresses when the number seated has come to as many as 10,000. That was the number which congregated in Bombay in 1889 when Sir William Wedderburn presided and was accompanied from London by the

late Mr. Charles Bradlaugh who afterwards introduced the first Reform Bill of the expanded Legislative Councils in Parliament in 1890. Delegates had had to pay a fee of Rs. 20 for attendance up till 1912, but the fee has since been reduced to Rs. 15. They are charged a very moderate fee for the days they are lodged and boarded. Some well-to-do delegates hire bungalows at their own expense, but the majority of delegates outside those of the province where a Congress is held, generally accept Congress accommodation which in smaller towns becomes a very serious and uphill task indeed.

British Committee.

It may be observed in conclusion that the Congress has an organisation also in London which is called the British Committee of the Congress. It is furnished with funds provided by the Indian National Congress. It has an establishment of its own and attached to it, though with independent income, an organ of opinion, called "India", which echoes the salient events of what may have happened every week in India. As such it performs useful service. It is well informed and is liberally circulated among members of Parliament who sympathise with Indian aspirations or take interest in the general progress and welfare of India. The Committee consists of retired Anglo-Indians and was for years presided over by that well-wisher and disinterested friend of India, Sir William Wedderburn, (d. 1918) who was twice elected President of the Congress. The Committee invariably invites distinguished or leading Indians when in London to take part in its deliberations. The Committee itself is in constant touch with all proceedings in the House of Commons on Indian affairs and often helps members to put questions when needed. Some years ago it formed a standing committee of members of the House of Commons and an attempt is about to be made to revive it. The Committee also keeps itself in communication with the India Office and often acts as a vehicle of conveying Indian opinion to the Secretary of State. As such the organisation renders valuable service to Indian cause in England.

The Congress Re-United.

For some years following 1907 efforts were made to heal the split and these were without avail until 1916 when a re-united Congress met at Lucknow under the presidency of Babu Ambica Charan Muzumdar of Faridpur in Bengal.

The Reforms.

The attitude of the Indian National Congress towards the Montagu-Chelmsford Scheme is fully summarised in the section Constitutional Reform in India (*q.v.*). What is commonly known as the joint scheme of the Indian National Congress and the Moslem League which is discussed in the Montagu-Chelmsford Report will be found set out in the Indian Year Book for 1918, pp. 659, 660, 661, 662, 663, 664 and 665. As is shown in the section on Constitutional Reform the effect of this Scheme was to sever the nominal unanimity between the Moderate and the Extreme Wings. The Congress went over entirely to the Extreme Wing and the Moderate Party is now setting up its own organisation.

THE 1919 SESSION.

In theory, at all events, the session of the Indian National Congress which began at Amritsar in Christmas week should have been devoted to the consideration of the new Government of India Act, embodying the scheme of constitutional reform in India, which became known shortly before the Congress met. In practice it was chiefly devoted to the consideration of the Punjab disorders. It was indeed unfortunate that at this important stage in the political evolution of India the Congress and the Moslem League should have met in a Province and a city of unhappy memories. Reference is made elsewhere to the outburst of lawlessness in the Punjab in April, the measures necessary to control it, the establishment of martial law and the protests made at many of the measures adopted under martial law, which led to the appointment of what is called the Hunter Commission to inquire into these allegations. The evidence given before this Commission in the Punjab in November aroused strong feelings in India. The portions of the evidence which raised the greatest indignation were the firing on the crowd which attended a proclaimed meeting in the Jallianwalla Bagh at Amritsar, when four hundred people were killed; and the manifestation of the desire of some of the officers entrusted with the administration of martial law to humiliate members of the educated community rather than to prevent disorder or to punish lawlessness. These conditions made Amritsar the most unpromising centre in India for the dispassionate consideration of a great scheme of constitutional reform. However the decision to hold the session at Amritsar was taken before the Punjab disturbances occurred; although some effort was suggested to move the venue, it was not accepted, and experience showed that the decision to have the session in this city of unhappy memories was wise, although it involved considerable risks.

The Speeches:—It was inevitable in these circumstances that the session should be dominated by memories of the disturbances; and although a great tranquillising influence was exercised by the King's Proclamation to the people of India announcing the Royal Assent to the Reform Act, and the promise of a generous amnesty—many of the ex-prisoners released under the amnesty were present at and took part in the discussions—the atmosphere was heated throughout. The address of the chairman of the Reception Committee, Swami Shradanand, was largely confined to the Punjab disturbances, although he pleaded for a policy of forgiveness. The President of the Congress, Pandit Motilal Nehru, also devoted himself mainly to the disturbances. His pronouncement on the Reform Act was somewhat halting, as that of one who saw the great advance which the Act embodies, and at the same time was too much afraid of the Advanced Wing in the Congress boldly to say so. The text of his references to the Act consisted of advice not to belittle the measure, because it gave them some power and opened new opportunities of service, but to make the most of what they had got and at the same time continue to press for what was their due.

The Discussions:—At all sessions of the Congress the chief discussions take place in the Subjects Committee, where the resolutions to be placed before the full session are drafted. The proceedings of this Committee are supposed to be private; in practice they are published in all the chief newspapers of India. From the reports of the proceedings in the Committee which have been published without contradiction, it is clear that the Advanced Wing took charge of the Congress, and overbore the handful of Moderates, prominent amongst whom were Mr. Sastri and Mrs. Besant, who strove for a more reasonable attitude. The principal points of difference were as to whether the Congress should express gratitude for the Reforms and disapprove of the omission from the Royal Proclamation of any reference to the Punjab disturbances. The Resolutions submitted to the Session were compromises, but compromises in which the Advanced Wing had the stronger influence. There was however a certain departure from practice in the bold moving in the Congress Session of amendments to the resolutions as issuing from the Subjects Committee. The Honourable Mr. Sarma, an active member of the Imperial Legislative Council, stood out strongly against the motion to condemn the Viceroy for his attitude of aloofness to the Punjab measures. Again, Mrs. Besant and Mr. Ghandi stood out against the chilly resolution on the Reforms. Neither of these three was able to secure acceptance of the individual views expressed; but the independence of all three is a welcome innovation in Indian politics.

General Conclusions:—The nature of the Congress session has undergone a great change during the past twenty-five years. Until last year the proceedings were invariably conducted in English, the one lingua franca in India. The writer can remember the Amraoti Congress in 1897 when a speaker was refused a hearing because he spoke in Urdu. But at the Delhi session in 1918 the practice was introduced of inviting "Peasant Delegates" without payment of the usual fee. These understand no language but the local vernacular; they will not listen to any speeches save in the local vernacular. The effect of this is curious. The vernaculars in the Punjab are Hindi and Urdu. These are not spoken freely in Bombay, Bengal and the Central Provinces; they are as foreign as English in Madras. The prodigious oration which the President had prepared in English was never delivered; a brief summary in English and in the vernacular was all the audience would listen to. Those who were dependent on English as the medium of expression were at a considerable disadvantage. The Congress session has now become such an unwieldy assembly and so uncontrollable, that as one commentator put it, it is now for all practice purposes a provincial assembly where if a vote were taken the audience would always be found to agree with the last speaker.

The Resolutions:—The principal resolutions are set out below:

II.—(a) This Congress protests against the attempt being made in South Africa and parti-

cularly the Transvaal to deprive the Indian settlers of the rights of property and trade hitherto enjoyed by them and trusts that the Government of India will secure the repeal of the recently enacted legislation and otherwise ensure the protection of the status of the Indian settlers in South Africa.

(b) This Congress is of opinion that the anti-Indian agitation now going on in East Africa is utterly unscrupulous and trusts that the Government of India will safeguard the right of free and unrestricted emigration from India to East Africa and the full civic and political rights of the Indian settlers in East Africa including the East African territory conquered from Germany.

V.—This Congress while fully recognising the grave provocation that led to a sudden outburst of mob frenzy, deeply regrets and condemns the excesses committed in certain parts of the Punjab and Gujerat resulting in the loss of lives and injury to person and property during the month of April last.

VI.—That, in view of the fact that neither the Hunter Committee nor the Congress Commission has finished its examination of witnesses and issued its report, this Congress while expressing its horror and indignation at the revelations already made and condemnation of the atrocities admitted, refrains from urging any definite steps to be taken against the offenders, yet having regard to the cold-blooded, calculated, massacre of innocent men and children, an act without parallel in modern times, it urges upon the Government of India and Secretary of State that, as a preliminary to legal proceedings being taken against him, General Dyer should be immediately relieved of his command.

Resolved further that the Congress desire to place it on record that in its opinion the Government of India and the Punjab Government must in any event be held responsible for the inexcusable delay in placing an authoritative statement of the massacre of *Jallianwalla Bagh* before the public and His Majesty's Government.

VII.—In view of the oppressive regime of Sir Michael O'Dwyer in the Punjab and the admitted fact brought out before the Hunter Committee that he approved of and endorsed General Dyer's massacre at the Jallianwalla Bagh, this Congress calls upon His Majesty's Government to relieve Sir Michael O'Dwyer of his present duties in this country as a member of the Army Commission as a preliminary to necessary legal action being taken against him.

XI.—(a) This Congress offers its respectful condolence to the relatives of those persons whether English or Indian who were killed and sympathy to those wounded or incapacitated during the April disturbances.

(b) This Congress further resolves that the site known as Jallianwalla Bagh in Amritsar be acquired for the Nation and be registered in the names of the Hon'ble Pandit Madan Mohan Malaviya and the Hon. Pandit Moti Lal Nehru as trustees and that it be used as a memorial to perpetuate the memory of those

who were killed or wounded on the 13th day of April last during the massacre by General Dyer.

XIII.—In view of the fact that Lord Chelmsford has completely forfeited the confidence of the people of this country, this Congress humbly beseeches His Imperial Majesty to be graciously pleased immediately to recall His Excellency.

XIV.—(a) This Congress reiterates its declaration of last year that India is fit for full responsible government and repudiates all assumptions and assertions to the contrary wherever made.

(b) That this Congress adheres to the resolutions passed at the Delhi Congress regarding Constitutional Reforms and is of opinion that the Reforms Act is inadequate, unsatisfactory and disappointing.

(c) That this Congress further urges that Parliament should take early steps to establish full responsible government in India in accordance with the principle of Self-determination.

(d) Pending such introduction this Congress trusts that so far as may be possible they will so work the Reforms as to secure early establishment of full responsible government and this Congress offers its thanks to Rt. Honourable E. S. Montagu for his labours in connection with the Reforms.

XV.—This Congress respectfully protests against the hostile attitude of some of the British Ministers towards the Turkish and 'Khilafat' question as disclosed by their utterances and most earnestly appeals to and urges upon His Majesty's Government to settle the Turkish question in accordance with the just and legitimate sentiments of Indian Mussalmans and the solemn pledges of the Prime Minister without which there will be no real content among the people of India.

XXI.—This Congress is emphatically of opinion that in the immediate and imperative interest of this country as well as of the whole British Empire a Statute should be forthwith passed by the Imperial Parliament to guarantee the civil rights of His Majesty's Indian subjects and embodying the following provisions:—

(1) British India is one and indivisible and all political power is inherent in the people thereof to the same extent as in any other people or nation of the British Empire.

(2) That all Indian subjects of His Majesty and all the subjects naturalised or resident in India are equal before the law, and there shall be no penal or administrative law in force in this country, whether substantive or procedural, of a discriminative nature.

(3) That no Indian subject of His Majesty shall be liable to suffer in liberty, life, property, or in respect of free speech or writing or of the right of association, except under sentence by an ordinary Court of Justice and as a result of lawful and open trial.

(4) That every Indian subject shall be entitled to bear arms subject to the purchase of a license as in Great Britain, and that the right shall not be taken away save by a sentence of an ordinary Court of Justice.

(5) That the Press shall be free and that no license or security shall be demanded on the registration of a press or a newspaper.

(6) That corporal punishment shall not be inflicted on any subject of His Majesty save under conditions applying equally to all other British subjects.

(7) That all laws, ordinances and regulations now or hereafter in existence that are anywise

inconsistent with the provisions of this statute shall be void and of no validity whatever.

XXIX.—This Congress places on record its warmest thanks to the All-India Moslem League for passing a resolution recommending the substitution of other animals instead of cows in respect of sacrifices on the occasion of Bakrid and recognises it as a great step towards the completion of Hindu-Moslem unity.

The Moslem League.

The Indian Moslem League was established in 1906. Prior to that time the Indian Moslems had stood aloof from politics. Acting under the guidance of the greatest man they have produced, **Sir Syed Ahmad**, they devoted their attention to education, founding the Aligarh College with the special purpose of making up the leeway of Mahomedans in education, and left politics to the other Indian peoples. A few Mahomedans joined the National Congress and took part in its annual sessions; but the community as a whole stood aside from political movements.

In 1906 however changes occurred which impelled Indian Moslems to action. Under the Act of 1892, constituting the Indian Legislative Councils, there was no specific Moslem representation and in the elections which had taken place under that Act the Moslems had for all practical purposes failed to find selection. Therefore, when the amendment of the Act and the extension of the representative principle were under discussion, they were stirred to action. They feared lest, under an academic system, adapted only to a homogeneous people, their distinct communal interests would either secure no representation at all, or only inadequate representation. They therefore took counsel together and approached the Viceroy in deputation, headed by His Highness the Aga Khan, and presented their views in an important State paper.

First Constitution.

It was felt that in view of the changed conditions the Moslems should organise their own political society for the expression of their communal policy. This was the origin of the Moslem League. The rules and regulations of the League provided for a constitution, with provincial branches, and defined the objects of the League in the following language:—

The objects of the League shall be:—

(a) to promote among Indian Mussalmans feelings of loyalty towards the British Government, and to remove any misconception that may arise as to the intentions of Government with regard to any of its measures;

(b) to protect the political and other rights and interests of Indian Mussalmans and to place their needs and aspirations before the Government in temperate language;

(c) without prejudice to the objects mentioned under (a) and (b) of this section, to

promote so far as possible concord and harmony between the Mussalmans and other communities of India.

Revised Constitution.

In 1912 and 1913 Moslem opinion as expressed by the League underwent a certain change. First at a meeting of the Council, afterwards at the annual session which was held at Lucknow, the constitution was amended so as to include in the objects of the League the attainment of a system of **self-government** in India under the Crown. The objects of the League, as defined in the most recent publication, are thus set forth:—

The objects of the League shall be:—

(a) to maintain and promote among the people of this country feelings of loyalty towards the British Crown:

(b) to protect and advance the political and other rights and interests of the Indian Mussalmans:

(c) to promote friendship and union between the Mussalmans and other communities of India:

(d) without detriment to the foregoing objects, attainment, under the ægis of the British Crown, of a system of self-government suitable to India, through constitutional means, by bringing about, amongst others, a steady reform of the existing system of administration, by promoting national unity, by fostering public spirit among the people of India and by co-operating with other communities for the said purposes.

This change in the constitution of the League produced much discussion and was opposed by many of the older men who had led the community.

There is a branch of the Moslem League in London.

The headquarters of the League are at Lucknow.

The attitude of the Moslem League towards the Scheme for Indian Constitutional Reform prepared by Lord Chelmsford and Mr. Montagu is indicated in the Section Constitutional Reform in India (q.v.). The Moslem League generally endorsed the views expressed by the Extreme Wing of the Indian National Congress. At the Delhi Session in December 1918 certain special questions relating to the future

of Turkey figured prominently in the discussion and the following resolutions *inter alia* were passed:—"That the All-India Moslem League enters its strong protest against the occupation of Jerusalem and Najafashraf by His Majesty's forces and hopes that all such places will be immediately restored. The League further requests His Majesty's Government, in view of the wishes of the Mussalmans of India, to use its good offices to dissuade other Allied Powers from taking any steps which might affect the position and status of their holy places."

"That the All-India Moslem League deems it necessary to remind Government of the declaration of policy made by His Majesty's Government that the question of the Caliphate is one for Moslem opinion alone to decide and begs to point out that any departure from that policy will cause great resentment and ill-feeling among Mussalmans. The League further requests His Majesty's Government to dissuade any Allied Power that might contemplate any interference with the question from taking any action in this matter."

THE 1919 SESSION.

The annual session of the Moslem League was held at Amritsar almost coincidentally with the meeting of the Indian National Congress. The Chairman of the Reception Committee was Dr. Kitchlew who was released from detention for his participation in the Punjab disturbances almost immediately before the session began. The President of the League was Hakim Ajmal Khan. In the course of his presidential address he went over very much the same ground, particularly in relation to the conditions in the Punjab, as the President of the Indian National Congress. Naturally he made special reference to the position with regard to the Khilafat and the holy places of Islam, saying Mussalmans cannot be expected to forget that over these lands, which were the cradle of Islam and in which holy places were situated, no non-Moslem can have the semblance of the right of a mandatory or other rule. Trampling upon Moslem sentiments would mean not creating a transitory but a perennial unrest in the entire Moslem world, which meant the deliberate awakening of unfriendly feelings in unobtrusive people. The President criticised the Anglo-Persian Agreement as the last straw on the load of the Indian Moslem anxiety and characterised Persia as the Egypt of Asia which would cease to have any conception of political liberty.

On all general political issues the resolutions of the Moslem League were a pale shadow of the resolutions of the Indian National Congress. A special feature of what may for all practical purposes be called a joint session was the resolution carried on the subject of cowkilling which is an old subject of soreness and dispute

between the Hindu and Mahomedan communities.

Important Resolutions:—"With a view to reciprocate the good feeling shown towards Mussalmans by their Hindu brethren and to strengthen the growing unity between them and the Mussalmans of India the Mussalmans should on occasion of Bakr-Id festival substitute as far as possible the sacrifice of other animals in place of cows.

"This meeting of the All-India Moslem League shares with the entire Moslem world the wide belief that His Imperial Ottoman Majesty, Sultan Waheeduddin, is the recognised Khalfa of Islam and places on record its deep-seated and unshakeable devotion to the sacred person of His Imperial Majesty as a successor of the Prophet and the head of Islam.

"This meeting of the All-India Moslem League expresses its deep disappointment at the disregard shown by the British Government to the repeated representations made by Indian Mussalmans through their representatives in England and India regarding the question of Khilafat, holy places and Jazirat-ul-Arab and feels constrained to express that no settlement contemplating the dismemberment of Turkey would ever satisfy Indian Mussalmans but keep them in a state of perpetual dissatisfaction and discontent, for the grave consequences of which they shall not be responsible. Under the circumstances the Mussalmans would be fully justified to carry on all possible methods of constitutional agitation open to them including a boycott of the British army if it is likely to be used outside India for Imperial and anti-Islamic purposes."

THE MODERATE CONFERENCE.

In the Indian Year Book, 1919, the course of events which led to a definite rupture between the Extremist and Moderate sections of the Indian National Congress is set out. For some years there was growing up a strong line of cleavage between these two elements in Indian public life. It came to a head at the Surat Session of 1907 which broke up in disorder because the Extremists could not get their own way. In 1916 a nominal union between the two wings was established when a reunited Congress met at Lucknow. The unity then established was however more artificial than real and the essential differences between the two wings were accentuated when the Montagu-Chelmsford Report on Indian consti-

tutional reforms was published in 1918. A grave question then arose as to what should be the Indian attitude towards the scheme of reforms then outlined. The Extremists at first tried to stampee the country into a rejection of the proposed reforms *in toto*. The Moderates, whilst refusing to accept every line of the Report as sacrosanct were determined to regard it as a marked development in the constitutional progress of India, and whilst pressing for an extension of the measures there proposed decided to accept them as a great step forward in the political evolution and as substantially satisfactory. The strong attitude taken by them and the growing appreciation in the country of the real liberality of the Reform

Scheme prevented the irreconcilables from stampeding political opinions as they had hoped. Nevertheless there was no prospect of agreement between the two wings, mainly because the Extremists insisted on characterising the reforms as disappointing and unsatisfactory, whilst the Moderates regarded them as liberal and progressive although falling short in some respects of their ideal.

Consequently the Moderates declined to join in a special session of the Indian National Congress which was held in August 1918 to consider the Reform Scheme; it held a special conference of its own where its own ideas were put forward in a series of resolutions. The bulk of the Moderates also abstained from the ordinary Christmas Session of the Congress in Delhi in 1918; they have continued to remain aloof from the older organisation and have set up their own. The essential differences between the two wings are clearly revealed by a study of the resolutions carried at the different sessions. A brief summary of the proceedings at the Indian National Congress has been given in the preceding pages. The Moderates held their own session in Calcutta when the Chairman of the Reception Committee, Sir Binode Mitter, very clearly indicated their attitude towards the scheme. Sir Binode Mitter emphatically declared that the Act brought new opportunities of service. Hitherto Indians had had no share in the actual government of the country; they were in the position of mere critics. They must now forget merely to criticise as they would have henceforth to solve real difficulties. The Chairman of the Conference, Sir P.S. Sivaswamy Iyer, emphasised these essential points. He said that the Act constituted a decided advance upon existing conditions and it gave them great opportunities of acquiring a practical knowledge of the art of responsible government.

The essential creed of the Moderates is indicated in the principal resolutions adopted at their session which are set out below:

Important Resolutions.—(a) This Conference desires to convey to the Right Honourable Mr. Montagu its heartfelt appreciation of the statesmanship, courage and single minded devotion displayed by him in initiating and carrying the reform proposals and setting India firmly on the road to responsible government.

(b) This Conference desires to record its proud appreciation of the Right Honourable Lord Sinha's services to the country in his capacity as a member of the War Cabinet, as a representative of India at the Peace Conference and in his conduct of the Reform Bill in the House of Lords.

(c) This Conference desires to thank the Joint Committee for removing several defects in the original Reform Bill and improving it.

While regretting the omission to introduce some measure of responsibility in the central government, this Conference welcomes the Government of India Act of 1919 as a definite and substantial step towards the progressive realisation of responsible government. This Conference appeals to all sections of the community, European and Indian, officials and

non-officials, whole-heartedly to co-operate for the successful working of the Act.

This Conference deeply regrets the long delay in the settlement of satisfactory peace terms with Turkey and views with grave concern any political action which may tend to affect the position or dignity of the Sultan of Turkey as the Khalifa or the guardian of the holy places of Islam. This Conference earnestly calls the attention of His Majesty's Government to the depth and intensity of the feelings of His Majesty's subjects on this question and strongly pleads for an early and satisfactory settlement in consultation with the Allies. This Conference emphatically urges that any settlement which disregards the sentiments of the Moslem world with which it is in agreement will create widespread discontent and may be detrimental to peaceful progress. No settlement of the Turkish question can in the opinion of this Conference be satisfactory which contravenes the principles of justice and national integrity and even fails to redeem the solemn pledges made during the war.

This Conference wishes to record its emphatic condemnation of the outrages committed by the mobs at several places in the Punjab and elsewhere and its deep sympathy with the victims and their families. This Conference while in no way wishing to anticipate the decision of the Hunter Committee, must express its sense of profound horror and indignation at the manner in which the situation which arose in the Punjab in April and May last was dealt with by the officials concerned as disclosed in their own evidence.

This Conference is of opinion that it is imperatively necessary—(1) to make amends for the outraged feelings of the Indian nation and that British honour and justice should be vindicated by taking steps to bring to justice any officials high or low, civil or military, who may be found to have acted unreasonably and in excess of their powers or to have authorised such acts; (2) that reparation should be made for all serious hardship caused by unwarranted acts of severity; (3) that safeguards should be provided against the recurrence of such things in the future. This Conference authorises its All-India Committee—(1) to take such action as may be necessary on the publication of the Report of the Hunter Committee; (2) to consider the necessity of the following safeguards among others and taking such further action as may be necessary:—(a) that the introduction, exercise and duration of martial law should be subject to the same constitutional limitations as in England; (b) that martial law should not be introduced unless it is impossible for the civil courts to sit and exercise their functions; (c) that the power of creating new offences for breach of regulations and providing penalties therefor should not be delegated to military officers; (d) that if courts martial are allowed to sit when civil courts are sitting any person not subject to the Naval Discipline Act or to military law who is charged with the contravention of any regulation should be allowed the option of a trial by the civil court; (e) that the remedy in the nature of *Habeas Corpus* should be made available in all parts of British India; (3) to further the object

of the resolution by arranging for a deputation to England or otherwise.

(1) The Liberal Party of India will work for the success of the constitutional reforms by following a policy of co-operation, and of promoting good understanding among the different communities and interests in the country. It will aim at a higher standard of national efficiency by means of administrative reforms, the wider spread of education, the improvement of public health, economic development, and amelioration of the condition of the backward classes of the population.

(2) The organisation of the Liberal party shall be known as the National Liberal Federation of India and the future sessions of the All-India Moderate Conference shall be designated the annual sessions of the National Liberal Federation.

(a) That the Council be instructed to do all that is necessary and possible in connection with all action that has to be taken under the Government of India Act of 1919 and the reports of the Punjab Enquiry Commission and the Indian Army Commission, as well as to bring about the repeal or a radical amendment of the Indian Press Act and also the repeal of the Rowlatt Act. (2) That the Council be further instructed to organise a deputation to proceed to England to urge before the statesmen and publicists there the views of the Conference on the aforesaid subjects, and do such other work as the Council may decide.

(b) This Conference is of opinion that it is desirable that the various provincial organisations of the National Liberal Federation should consider the following subjects and frame suitable programmes of constructive work in connection therewith:—(1) The placing of the principles of land revenue settlements on a legislative basis. (2) A definite programme of development of irrigation if necessary by borrowed capital. (3) Development of provincial railways and reform of the present method of railway administration and of the railway tariff so far as it affects each province. (4) An immediate expansion of free elementary education with the ultimate goal of introduction of compulsory education at an early date. (5) Reforms connected with the elementary, secondary and higher education (collegiate and technical). (6) Development of agriculture and the improvement of the economic condition of the agriculturists. (7) Reform of the excise administration with a view to minimise gradually the consumption of liquor and with a view to the ultimate introduction of total prohibition. (8) Development and expansion of industries and the organisation of better credit for the rural classes. (9) The amelioration of the condition of the backward classes and the improvement of the present condition of labour and the housing of the poorer classes. (10) Retrenchment of public expenditure and reform of existing methods of administration with specific reference to the improvement of district administration. (11) Organisation of medical relief and sanitation.

The Afghan War.

Up to the time of going to press with this book the official despatches dealing with the Afghan War of 1919 have not been published, and, as only the scantiest details of the operations were given in the official communiques published during the course of the war, nothing more than a summary of those operations is here attempted.

The first incursion of Afghans into territory indisputably within British limits occurred on May 8, when they occupied **Asa Khel**, but before that date an escort of the Khyber Rifles had been threatened near **Landi Khana** by tribesmen under **Zar Shah** who produced a firman from **Amir Amanulla** which practically amounted to a decree to raise war against the British Government. On the 5th the Afghans occupied **Tor Sappa**, **Spin Tsuka** and **Bagh** and two days later they fired on an aeroplane reconnaissance near **Landi Kotal**. By this time there was no doubt of the intentions of the Afghans, and our first steps to meet them were taken on the 5th, when **Landi Kotal** was reinforced from **Peshawar**, and on the following day when martial law was declared. At **Peshawar**, where the Afghan postmaster, who had been distributing inflammatory literature and who had made himself the centre of agitation of the wildest character, was arrested and the city was cleared of other dangerous elements including three Indian agitators who gave themselves up. On May 9 the Afghans were driven out of **Asa Khel**, a small village near **Landi Kotal**, and an advance was made down the pass to the west of **Landi Kotal** to secure the springs and reservoirs at **Tangi**. On the same day the Afghan headquarters camp at **Dakka** was bombed by aeroplanes. On the 11th our advanced troops at **Landi Kotal** having been reinforced, the enemy were defeated at **Bagh** and driven of the **Khargall** ridge which they were holding in force. The enemy lost six guns and one Gardner gun and their casualties in killed were estimated at 100. On the 13th **Dakka**, which had previously been reported to have been evacuated by the enemy, was occupied by our troops without opposition. By this time considerable signs of indecision and hesitation were to be seen in the Afghan army and a communique issued on the 15th showed that the Afghan Commander-in-Chief had made a request for the cessation of hostilities in a letter off which the impertinence was only exceeded by its mendacity. The true facts of the outbreak of war were set out in a proclamation by the Viceroy addressed to the people of Afghanistan and published on the same day.

Disappointed of that assistance from India which they had been led by their agents to expect, the Afghans for the most part confined themselves to such operations as endeavouring to raise the tribesmen against us and to sniping and wire-cutting in the Khyber, but on May 16 they made an unsuccessful attack on our camp at **Dakka** and on the same day were driven off when following up our troops withdrawing from a reconnaissance near **Basawal**. On the

17th the Afghan position about two miles west of **Dakka**, held by eight battalions and guns was attacked and the enemy suffered heavy defeat losing five guns and about 300 killed. On the 19th and 20th **Jalalabad** was systematically bombed, two tons of explosives being dropped, and on the following day **Sardar Abdul Rahman**, the late Afghan envoy in India, made unofficial overtures for peace which were not supported by any credentials and which were generally construed as being no more than a ruse to gain time. The air raids were continued, **Kabul** and **Jalalabad** being bombed on the 24th. In the mean time the enemy extended the field of operations which had so far been confined chiefly to the Khyber area. On May 14 a party of Afghans had been defeated and driven with loss out of **Chitral** limits and on the 23rd the enemy was defeated and lost 250 killed and 4 guns near **Arnawai** in **Chitral**. A few days previously the enemy had entered the **Mohmand** country and were also making demonstrations on the **Paiwar** ridges.

Nadir Khan was reported to be sending troops down the **Kaitu** river and towards **Tochi**. That report was soon verified and as a result the **G. O. C. Tochi** was obliged to evacuate all the posts on the **Thal-Idakm** line and in **Upper Tochi**, so that the Afghans were able with **Mahsud** and **Waziri** assistance to occupy **Spinwam** and then to destroy the upper **Tochi** posts. This naturally reacted on the North **Waziristan** Militia who had until then remained loyal unlike the **Khyber Rifles** whom it had been found necessary (with the exception of 200-300 retained as messengers for political work) to disband. Desertions of militia men became frequent, and it was evident that the first impressions as to the attitude of the tribesmen would have considerably to be revised. In the Khyber area and farther north, however, the attitude of the tribesmen continued satisfactory, and the capture of the Afghan frontier post of **Spin Baldak** (May 26) by our troops in the **Chaman** area had a far reaching effect. Practically the whole garrison of that fort, which was said to be the strongest in Afghanistan, was either killed or taken prisoners. On May 26 the enemy occupied the hills near **Thal** and two days later entered and gutted the town, the fort being several times unsuccessfully attacked by **Nadir Khan's** troops. On the following day it was necessary to evacuate **Wana**, **Sawarkai** and the militia posts in the **Gomal**, the ammunition which could not be removed being destroyed previous to the evacuation. Except for several attacks on isolated posts the operations from this time onwards assumed an increasingly desultory character. On June 1st troops from **Kohat** reached **Thal** and drove the enemy off the hills to the south-east and on the next day defeated a party of the enemy on the hills north-west of the town. A punitive column was subsequently sent to operate against the **Biland Khel** villages south of **Thal**, and similar operations were undertaken in the **Tochi** valley. Among

the attacks on posts by the enemy the more important were on Jandola post by Mahsuds (May 30) on Manikhwan post in Zhob which the enemy captured on June 3rd; on Draband and Chaudwan, by Mahsuds and Sherwannis on June 4; on Fort Sandeman (June 10); and on Musa Khel in Zhob on June 11. Tribesmen also attacked a column marching from Lakaband to **Fort Sandeman** on June 8 and the column suffered 33 casualties before reaching its destination.

Negotiations for peace were begun by the Afghans late in May, their delegates arrived at Rawal Pindi on June 25 and on August 11 peace was signed. The **text of the peace** is as follows:—

Treaty of peace between the illustrious British Government and the independent Afghan Government concluded at Rawal Pindi on the 8th August 1919 corresponding to the 11th Ziqad 1337 Hijra.

The following articles for the restoration of peace have been agreed upon by the British Government and the Afghan Government: Article 1. From date of signing of this treaty there shall be peace between the British Government on the one part and the Government of Afghanistan on the other. Article 2. In view of the circumstances which have brought about the present war between the British Government and the Government of Afghanistan the British Government to mark their displeasure withdraw the privilege enjoyed by former Amirs of importing arms, ammunition, or warlike munitions through India to Afghanistan. Article 3. The arrears of the late Amir's subsidy are furthermore confiscated and no subsidy is granted to the present Amir. Article 4. At the same time the British Government is desirous of the re-establishment of the old friendship that has so long existed between Afghanistan and Great Britain provided they have guarantees that the Afghan Government are on their part sincerely anxious to regain the friendship of the British Government. The British Government are prepared therefore, provided the Afghan Government prove this by their acts and conduct, to receive another

Afghan mission after six months for the discussion and amicable settlement of matters of common interest to the two Governments and the re-establishment of the old friendship on a satisfactory basis. Article 5. The Afghan Government accept the Indo-Afghan frontier accepted by the late Amir. They further agree to the early demarcation by a British commission of the undemarcated portion of the line to the west of the Khyber where the recent Afghan aggression took place and to accept such boundary as the British commission may lay down. The British troops on this side will remain in their present positions until such demarcation has been effected.

Independence of Afghanistan.—The following cable from the Viceroy to the Secretary of State for India, dated 9th August, contains information supplementary to the Treaty:—

“ Sir H. Grant reports that after signature of Peace Treaty he handed Afghan delegate following letter: “ You asked me for some further assurance that the Treaty of Peace now offered by the British Government contains nothing that interferes with the complete liberty of Afghanistan in external or internal matters. My friend, if you will read the Treaty of Peace with care you will see that there is in it no such interference with the liberty of Afghanistan. You have informed me that the Government of Afghanistan is unwilling to renew the arrangement under which the late Amir, Habibullah Khan, agreed to follow the advice of the government of Great Britain in matters affecting the external relations of Afghanistan without reserve. I have therefore refrained from pressing this matter of which the Treaty of Peace contains no mention. By the said Treaty and this letter, therefore Afghanistan is left officially free and independent in its affairs, both internal and external. Furthermore, all previous treaties have been cancelled by this war.”

Official information about the Afghan War is contained in a Parliamentary Paper (CMD. 324) “ Papers regarding hostilities with Afghanistan, 1919” and two reports on the medical arrangements (CMD. 310) and (CMD. 398).

Posts and Telegraphs.

POST OFFICE.

The control of the Posts and Telegraphs of India is vested in an officer designated Director-General of Posts and Telegraphs who works in subordination to the Government of India in the Department of Commerce and Industry. The superior staff of the Direction, in addition to the Director-General himself, consists on the postal side of two Deputy Directors-General (who are officers of the rank of Postmaster-General), four Assistant Directors-General (whose status is similar to that of Deputy Postmasters-General), and two Personal Assistants (who are selected from the staff of Superintendents).

For postal purposes, the Indian Empire is divided into eight circles as shown below, each in charge of a Postmaster-General:—Bengal and Assam, Bihar and Orissa, Bombay, Burma, Central, Madras, Punjab and North-West Frontier, and United Provinces. The Central Circle comprises roughly the Central Provinces and the Central India and Rajputana Agencies.

The Postmasters-General are responsible to the Director-General for the whole of the postal arrangements in their respective circles, with the exception of those connected with the conveyance of mails by railways and inland steamers which are entrusted to three officers bearing the designation of Deputy Postmaster-General, Railway Mail Service. All the Postmasters-General are provided with Personal Assistants, while those in charge of the largest circles are also assisted by Deputy Postmasters-General. The eight Postal Circles and the jurisdictions of the three Deputy Postmasters-General, Railway Mail Service, are divided into Divisions, each in charge of a Superintendent; and each Superintendent is assisted by a certain number of officials styled Inspectors or Assistant Superintendents.

Generally there is a head post office at the head-quarters of each revenue district and other post offices in the same district are usually subordinate to the head office for purposes of accounts. The Postmasters of the Calcutta, Bombay, and Madras General Post Offices and of the larger of the other head post offices are directly under the Postmaster-General and the least of them exercises the same powers as a Superintendent of Post Offices in respect of inspections, appointments, leave and punish-

ments. The Presidency Postmasters, indeed, have one or more Superintendents subordinate to them. When the duties of the Postmaster of a head office become so onerous that he is unable to perform them fully himself, a Deputy Postmaster is appointed to relieve him of some of them, and if still further relief is required one or more Assistant Postmasters are employed. The more important of the offices subordinate to the head office are designated sub-offices and are usually established only in towns of some importance. Sub-offices transact all classes of postal business with the public, submit accounts to the head offices to which they are subordinate, incorporating therein the accounts of their branch offices, and frequently have direct dealings with Government local sub-treasuries. The officer in charge of such an office works it either single-handed or with the assistance of one or more clerks according to the amount of business.

Branch offices are small offices with limited functions ordinarily intended for villages, and are placed in charge either of departmental officers on small pay or of extraneous agents, such as school-masters, shopkeepers, land-holders or cultivators who perform their postal duties in return for a small remuneration.

The audit work of the Post Office is entrusted to the Accountant-General, Posts and Telegraphs, who is an officer of the Finance Department of the Government of India and is not subordinate to the Director-General. The Accountant-General is assisted by Deputy Accountants-General, all of whom, with the necessary staff of clerks, perform at separate headquarters the actual audit work of a certain number of postal circles.

In accordance with an arrangement which has been in force since 1883, a large number of sub-post offices and a few head offices perform telegraph work in addition to their postal work and are known by the name of combined offices. The policy is to increase telegraph facilities everywhere and especially in towns by opening a number of cheap telegraph offices working under the control of the Post Office. The telegraph expenditure on account of these combined offices is borne by the Telegraph Department to which the whole of their telegraph revenue is also credited.

The **Inland Tariff** (which is applicable to Ceylon and Portuguese India except as indicated below) is as follows:—

	When the postage is prepaid.	When the postage is wholly unpaid.	When the postage is insufficiently prepaid.
<i>Letters.</i>	<i>Anna.</i>	Double the prepaid rate (chargeable on delivery).	
Not exceeding 1 tola	$\frac{1}{2}$		
Exceeding 1 tola but not exceeding two and a half tolas	1		
Every additional two and a half tolas or part of that weight	1		
<i>Book and pattern packets.</i>		Double the deficiency (chargeable on delivery).	
Every 10 tolas or part of that weight..	$\frac{1}{2}$		

Postcards.

Single	..	..	..	½ anna.
Reply	..	..	..	½ „

(The postage on cards of private manufacture must be prepaid in full.)

Parcels (prepayment compulsory).

(a) Parcels not exceeding 440 tolas in weight:—

	Rs. a.
Not exceeding 20 tolas	0 2
Exceeding 20 tolas but not exceeding 40 tolas	0 3
For every additional 40 tolas or part of that weight	3 annas.

(b) Parcels exceeding 440 tolas in weight:—

4 annas for every 40 tolas or fraction thereof up to 800 tolas.

Registration is compulsory in the case of parcels weighing over 440 tolas.

These rates are not applicable to parcels for Portuguese India.

Registration fee.

	Rs. a.
For each letter, postcard, book or pattern packet, or parcel to be registered	0 2

Ordinary Money Order fees.

On any sum not exceeding Rs. 5	0 1
On any sum exceeding Rs. 5 but not exceeding Rs. 10	0 2
On any sum exceeding Rs. 10 but not exceeding Rs. 15	0 3
On any sum exceeding Rs. 15 but not exceeding Rs. 25	0 4
On any sum exceeding Rs. 25 up to Rs. 600	0 4

for each complete sum of Rs. 25, and 4 annas for the remainder; provided that, if the remainder does not exceed Rs. 5, the charge for it shall be only 1 anna; if it does not exceed Rs. 10, the charge for it shall be only 2 annas and if it does not exceed Rs. 15, the charge for it shall be only 3 annas.

Telegraphic money order fees.—The same as the fees for ordinary money orders plus a telegraph charge calculated at the rates for inland telegrams for the actual number of words used in the telegram advising the remittance, according as the telegram is to be sent as an "Express" or as an "Ordinary" message.

In the case of Ceylon the telegraph charge is at the rate of Re. 1 for the first 12 words and 2 annas for each additional word. Telegraphic money orders cannot be sent to Portuguese India.

Value-payable fees.—These are calculated on the amount specified for remittance to the sender and are the same as the fees for ordinary money orders.

Insurance fees.—For every Rs. 50 of insured value 1 anna.

As regards Ceylon and Portuguese India see Foreign Tariff.

Acknowledgment fee.—For each registered article 1 anna.

The Foreign Tariff (which is not applicable to Ceylon except in respect of insurance fees or to Portuguese India except in respect of insurance fees and parcel postage) is as follows:—

Letters.

To the United Kingdom, other British Possessions and Egypt, including the Soudan. } 1½ annas for the first ounce and 1 anna for each additional ounce or part of that weight.

To other countries, colonies or places. } 2½ annas for the first ounce and 1½ annas for every additional ounce or part of that weight.

Postcards Single	..	..	..	1 anna.
„ Reply	..	..	..	2 annas.

Printed Papers.—½ anna for every 2 ounces or part of that weight.

Business Papers.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 2½ annas for each packet.

Samples.—½ anna for every 2 ounces or part of that weight, subject to a minimum charge of 1 anna for each packet.

(The rates shown above are those chargeable when the postage is prepaid.)

Parcels.—(Prepayment compulsory.) The rates vary with the countries to which they are addressed. The rates to the United Kingdom are—

			Via Gibral- tar.		Over- land.
			Rs. a. p.		Rs. a. p.
Not over	3 lbs.	..	0 12 0	1	8 0
„	7 „	..	1 8 0	2	4 0
„	11 „	..	2 4 0	3	0 0

Registration fee.—2 annas for each letter, postcard, or packet.

Money Orders.—To countries on which money orders have to be drawn in rupee currency, the rates of commission are the same as in the case of inland money orders.

To countries on which money orders have to be drawn in sterling, the rates are as follows:—

				Annas.
Not exceeding £ 1	..	..	..	3
Exceeding £1 but not exceeding £2	..	..	..	5
„ £2 „ „	..	..	£3	8
„ £3 „ „	..	..	£4	10
„ £4 „ „	..	..	£5	12
„ £5 .. ..	..	..	..	12

for each complete sum of £5 and 12 annas for the remainder, provided that if the remainder does not exceed £1, the charge for it shall be 3 annas; if it does not exceed £2, the charge for it shall be 5 annas; if it does not exceed £3, the charge for it shall be 8 annas; and if it does not exceed £4, the charge for it shall be 10 annas.

Insurance fees—

To countries other than those named below .. 3 annas for every £5,
To Ceylon and Portuguese India 2 annas for every Rs. 100.
To Mauritius the Seychelles, Zanzibar, and the British East Africa; Uganda; and Somaliland Protectorates 4 annas for every Rs. 100.

Acknowledgment fee.—2 annas for each registered article.

Growth of the Post Office.—At the end of 1897-98 the total number of post offices was 11,742 and the total length of mail lines 126,351 miles. For the 31st March 1919 the corresponding figures were 19,445 and 1,57,395½. During the year 1897-98, the total number of letters, postcards, newspapers and packets given out for delivery was 460,899,344, while for the year 1918-19 the total number of unregistered articles of the same classes given out for delivery *plus* the number of registered letters and packets posted amounted to 1,180,209,452. The number of parcel mail articles given out for delivery in the former

year was 4,119,781 as compared with 14,264,559 such articles posted during the latter year. The total number and value of money orders issued increased from 11,795,041 and Rs. 24,79,45,455 in 1897-98 to 36,106,940 and Rs. 79,67,82,573, respectively, in 1918-19. During the former year the total number of articles insured for transmission by post was 326,645 with an aggregate declared value of Rs. 10,00,62,590 and the corresponding figures for 1910-11 were 1,169,428 and Rs. 26,88,78,925. As the result, however, mainly of the introduction in 1911-12 of the rule under which inland articles containing currency notes or portions thereof must be insured, the figures for 1918-19 stand at 3,845,189 and Rs. 1,13,26,48,840. The number of accounts open on the books of the Post Office Savings Bank grew from 730,387 on the 31st March 1898 to 1,677,407 at the end of 1918-19; with an increase from Rs. 9,28,72,978 to Rs. 18,82,44,749 in the total amount standing at the credit of depositors. The total staff on the 21st March 1919 numbered 99,074. The net financial result of the working of the Post Office for the year 1918-19 was a surplus of Rs. 38,02,465.

This account of the activities of the Post Office would not be complete if it were not mentioned that on the 31st March 1919 there were 27,810 active Postal Life Insurance policies with an aggregate assurance of Rs. 3,96,39,610 and that during 1918-19 it disbursed a sum of Rs. 56,46,718 to Indian Military pensioners; sold over 3 crores of cash certificates to the public; collected at its own expense a sum of Rs. 24,70,410 on account of customs duty on parcels and letters from abroad; and sold 11,844 lbs. of quinine to the public.

TELEGRAPH DEPARTMENT.

Telegraphs.—Up to 1912 the telegraph system in India was administered as a separate department by an officer designated Director-General of Telegraphs who worked in subordination to the Government of India in the Department of Commerce and Industry. In that year it was decided to vest the control of Posts and Telegraphs in a single officer as an experimental measure with a view to the eventual amalgamation of the two Departments.

In pursuance of this policy an experimental amalgamation of the two services was introduced in the Bombay and Central Circles from the 1st July 1912. The fundamental principles of this scheme which followed closely the system in force in the United Kingdom and several other European countries were that the traffic and engineering work of the Telegraph Department should be separated, the former branch of work in each Circle being transferred to the Postmaster-General assisted by a Deputy Postmaster-General and a suitable number of attached officers and the engineering branch being controlled by a Director of Telegraphs in charge of the two Circles. Subordinate to this

officer there were several Divisional Superintendents who were assisted by a number of attached officers.

In 1914 the complete amalgamation of the two Departments was sanctioned by the Secretary of State and introduced from 1st April. The superior staff of the Direction, in addition to the Director-General himself, consists on the engineering side of a Chief Engineer, Telegraphs, with an Assistant, and a Personal Assistant to the Director-General. For traffic work there are a Deputy Director-General, with an Assistant and an Assistant Director-General. In the Circles the scheme which has been introduced follows closely on the lines of the experimental one referred to above. For telegraph engineering purposes India is divided up into three Circles, each in charge of a Director of Telegraphs. For Burma special arrangements were considered necessary and the engineering work is in charge of the Post Master-General who is a Telegraph officer specially selected for the purpose. These four Circles are divided into twenty Divisions each of which is in charge of a Superintendent of Telegraph Engineering.

The telegraph traffic work is under the control of the Postmasters-General, each of whom is assisted by a Deputy Postmaster-General and a suitable staff of attached officers.

The audit work of the Telegraph Department is, like that of the Post Office, entrusted to the Accountant-General, Posts and Telegraphs, assisted by a staff of Deputy and Assistant Accountants-General.

Inland Tariff.—The tariff for inland telegrams is as follows:—

Private and State.

Ex-press.	Ordinary.
Rs. a.	Rs. a.

Minimum charge	.. 1 8 0 12	} Address charged for.
Each additional word	.. 0 2 0 1	

Additional charges.

Minimum for reply-paid telegram	.. 12 annas.
Acknowledgment of receipt	.. 12 "
Multiple telegrams, each 100 words or less	.. 4 "
Collation	.. One quarter of charge for telegram.

		Rs.
For acceptance of an Express telegram during the hours when an office is closed.	If both the offices of origin and destination are closed	2
	If only one of the offices is closed.	1
	If the telegram has to pass through any closed intermediate office an additional fee in respect of each such office of	1
Signalling by flag or semaphore to or from ships—per telegram	The usual inland charge plus a fixed fee of 8 annas.	
Boat hire	Amount actually necessary.	

Copies of telegrams, each 100 words or less .. 4 annas.

Press.

	Ex-press.	Ordinary.
	Rs. a.	Rs. a.
Minimum charge	.. 1 0 0 8	} Address free.
Each additional 6 words over 48	.. 0 2 0 1	

Ceylon.

Ceylon is not regarded as "Inland" but Portuguese India is.

The following communique was issued by the Government of India on 6th January 1919:—Consequent on the recent revision of the Indian inland telegraph rates, the Government of India, in consultation with the Government of Ceylon, have had under consideration the question of the rates for telegrams exchanged between India and Ceylon. They have now decided with the concurrence of the Colonial Government that from the 1st of February, 1919, there should be an ordinary service for private

and State telegrams and telegraphic money orders at the existing rates. An ordinary private telegram to Ceylon will, therefore, be charged for at the rate of one rupee for twelve words, with two annas for each additional word. To meet the requirements of those members of the public who desire special telegraph facilities, an express service will also be introduced from the same date at the rate of two rupees for twelve words, with three annas for each additional word. No change will be made in the existing rates for press telegrams to Ceylon.

Foreign Tariff.—The charges for foreign telegrams vary with the countries to which they are addressed. The rates per word for private and state telegrams to all countries in Europe except Russia and Turkey are as follows:—

	Private.	State.
	Rs. a.	Rs. a.
Via Turkey (<i>Suspended</i>)	.. 1 6	....
;; Indo (<i>Suspended</i>)	.. 1 4	0 12
;; Eastern	.. 1 4	0 10

Growth Telegraphs.—At the end of 1897-98 there were 50,305 miles of line and 155,088 miles of wire and cable, as compared with 87,814 and 357,472 miles, respectively, on the 31st March 1919. The numbers of departmental telegraph offices were 257 and 185, respectively, while the number of telegraph offices worked by the Post Office rose from 1,634 to 3,368. The increase in the number of paid telegrams dealt with is shown by the following figures:—

		1897-98.	1918-19.
Inland	{ Private	.. 4,107,270	15,878,590
	{ State	.. 860,382	2,047,950
	{ Press	.. 35,910	225,559
Foreign	{ Private	.. 735,679	2,000,775
	{ State	.. 9,896	139,018
	{ Press	.. 5,278	36,176
		5,754,415	20,328,063

The outturn of the workshops during 1917-18 represented a total value of Rs. 13,58,000. At the end of the year the total staff numbered 10,960. The total capital expenditure up to the close of 1917-18 amounted to Rs. 13,32,55,339. The net revenue for the year was Rs. 1,19,62,299.

Wireless.—The total number of wireless telegraph stations open for traffic at the end of 1918-19 was twenty, viz., Port Blair, Rangoon, Diamond Island, Table Island, Victoria Point, Madras, Bombay, Sandheads, Calcutta, Karachi, Delhi, Simla, Allahabad, Lahore, Nagpur, Peshawar, Quetta, Secunderabad, Maymyo and Mhow.

Telephones.—On the 31st December 1918 the number of telephone exchanges established by the Department was 241 with 7,086 connections. Of these exchanges, 61 were worked departmentally. The number of telephone exchanges established by Telephone Companies was 13 with 15,653 connections.

Scientific Surveys.

The Botanical Survey is under the direction of the Superintendent of the Royal Botanic Garden, Calcutta, with whom are associated the Economic Botanists belonging to the Agricultural Department. In 1912 the post of Reporter on Economic Products was abolished and replaced by that of Economic Botanist to the Botanical Survey. Much of the systematic botanical work of India is done for the Department by forest officers and others. Over 2,000 specimens were obtained in 1911-12 by the officer deputed to accompany the Abor Expedition as botanist, and a material addition was made to the information available as to the vegetation of the little-known frontier region traversed.

Geological Survey.—The first object of the Department is the preparation of a general geological map of India. Various economic investigations, which form an increasingly important part of the Department's work, are also conducted. These include investigation of marble and sandstone quarries for the purpose of building Imperial Delhi, the examination of the Korea coal-field in the Central Provinces, of petroliferous localities in the Punjab and North-West Frontier Province, of pitchblende areas in the Gaya District, &c.

Zoological Survey.—A scheme for the formation of a Zoological Survey on the basis of the Zoological and Anthropological Section of the Indian Museum, Calcutta, came into force in July, 1916. The proposals as sanctioned by the Secretary of State mainly are as follows:—The headquarters of the Survey will be the Indian Museum. The scheme regarding the Zoological Survey entails the breaking up of the organisation now known as the Zoological and Anthropological Section of the Indian Museum into two parts, one of which will become a Government department under the title of the Zoological Survey of India, and will be primarily concerned with zoological investigation and exercise such advisory functions as may be assigned to it by Government, while the other part will remain as the office of the Trustees of the Indian Museum and will be organised for the present on the lines laid down in the existing by-laws of the Museum. It will be the duty of the Zoological Survey to act as guardians of the standard zoological collection of the Indian Empire, and as such to give every assistance in their power both to officials and to others, in the identification of zoological specimens submitted to them, arranging, if requested to do so, to send collections to specialists abroad for identification in cases in which no specialist is available in India. The Director of the Survey is Dr. Anandale.

Mammal Survey.—An important movement has recently been inaugurated by the Bombay Natural History Society which has collected subscriptions for a survey of the mammals of India. This Survey was begun in 1911 with the object of getting together properly prepared specimens of all the

different kinds of Mammals in India; Burma and Ceylon so that their distribution and differences might be more carefully worked out than had been done before, also to form as complete as possible a collection of specimens for the Society's Museum in Bombay. Before the Survey started the Society had a very small collection, and even in the British Museum in London the Indian specimens were very poorly represented. Three trained collectors from England are in the service of the Society and the specimens obtained by the Survey are being worked out at the British Museum and duplicates presented to the different Indian Museums. In India most of the country has been worked on the West Coast from Coorg as far north as Mount Abu, also the Central Provinces, Kumaon and Bengal. The whole of Ceylon has been worked, and so has a considerable part of Burma. At the present time owing to the war only one collector is in the field in Sikkim, the others having been on service. Funds for the Survey were raised by subscription from the principal Native Chiefs and some prominent Bombay citizens together with grants from the Government of India, the Government of Ceylon, the Government of Burma, the Government of the Malay States, and the different local Governments as well as donations from the Royal Society, the British Museum and the Zoological Society of London.

The Board of Scientific Advice.—This Board includes the heads of the Meteorological, Geological, Botanical, Forest, and Survey Departments, representatives of the Agricultural and Civil Veterinary Departments, and other scientific authorities whose special attainments may be useful. It was established in 1902 to co-ordinate official scientific inquiry, to ensure that research work is distributed to the best advantage, and to advise the Government of India in prosecuting practical research into those questions of economic or applied science on the solution of which the agricultural and industrial development of the country so largely depends. The programmes of investigation of the various departments are annually submitted to the Board for discussion and arrangement, and an annual report is published on the work done.

The Secretary to the Government of India (Department of Revenue and Agriculture) is *ex-officio* President of the Board which includes the Director-General, of Observatories, the Director of the Zoological Survey, the Surveyor-General of India, the Principal, Punjab Veterinary College, the Director of the Indian Institute of Science, the Inspector-General of Forests, the Agricultural Adviser to the Government of India, the Director of the Geological Survey, the Director-General, Indian Medical Service, the Secretary to the Government of India, Public Works Department, and the Director of the Botanical Survey of India who is Secretary to the Board of Scientific Advice.

The Programme of the scientific departments for 1919-20 includes the following. The Meteorological department will organise upper air observatories in various places in connexion with the proposed air services. The Kodaikanal Observatory will investigate the displacement of solar lines, the spectrum of Venus, and solar rotation. The Survey of India expects to commence meteorological work and will continue its magnetic work. The Geological Survey of Bihar, Orissa, the Central Provinces and Burma will be continued and enquiries into Wolfram and tin in Tenasserim, Sulphur and Chromite in Baluchistan and Seistan and Mica in Bihar and Orissa will be taken up, and research made into Gondwana fossil plants and fossils from Sind, Baluchistan, the North-West Himalayas and Burma. From shortage of staff the work of the Botanical and Zoological Surveys will be much curtailed but it is hoped that Cinchona work will be extended and that the survey of the fresh water molluscs of India and the investigation of the Chilka Lake fishes and Indian Diptera will be continued. Under Forestry the technical and physical properties and the actual and potential uses of Indian timber for numerous purposes, the antiseptic treatment of timber, material for paper pulp, fibres, gums, oleo-resins, the fungal diseases and insect pests of forest trees, the culture of various species of trees of economic importance, and the chemistry of various forest products will form subjects for investigation. Under Agriculture, the chemical investigation of drainage water from fallow and cropped soils, of alkali soils, of green manures, of "windrowing" on sugar cane; the botanical study of wheat, tobacco, fibre plants, cotton, indigo, fodder crops and fruit; the fungal diseases of jute, sugarcane, rice, rubber, etc.; the insect pests of sugar, rice, cotton, fruit trees, and stored grain, insect control and the bionomics of blood sucking insects, the bacteriology of Indian soils, the bacteriology and chemistry of Indigo, experimental work in practical agriculture and the diseases of farm stock, will be the chief subjects of investigation.

The Indian Research Fund.—Scientific research work is rapidly developing in India. In 1911 the sum of 5 lakhs (£33,000) out of the surplus opium revenue was set aside as an endowment for research into epidemic diseases in connection with the Central Research Institute, at Kasauli. It was hoped that this sum might be largely augmented by private subscriptions. An Indian Research Fund Association was constituted, and a good deal of work has already been undertaken. Its objects are defined as "the prosecution and assistance of research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of communicable diseases." Fresh investigations into kala azar and cholera have been inaugurated, and an officer was deputed, at the expense of the Fund, to study yellow fever in the regions where it is endemic, with a view to taking steps to prevent its introduction into India. A further grant of 6 lakhs (£40,000) was made to the Central Research Fund from the opium surplus of 1911-12. It has been decided to devote to research and anti-malarial projects

5 lakhs (£33,000) a year from Imperial revenues commencing in 1913-14. A new periodical, "The Indian Journal of Medical Research," was instituted in 1913 and is published four times annually, as the official organ of the Research Fund. The journal deals with every branch of research directly or indirectly connected with medical and sanitary science, and forms a record of what is being done in India for the advance of this work. For the year 1917-18 the Board recommended the continuance on the existing lines of the following inquiries:—Beri Beri by Lieutenant-Colonel McCarrison; Leprosy by Dr. Sudhamoy Ghosh; Hook-worm by Dr. K. S. Mhaskar; Plague Prevention by Dr. G. D. Chitre; Entomological by Mr. Awati and Mr. Mitter. A grant has been made to Lieut.-Col. Glen Liston for experiments with hydro-cyanic acid gas as a disinfectant.

Survey of India.—The work of the Survey of India Department falls under various heads, namely, the trigonometrical survey, topographical and forest surveys, special surveys and explorations, and map production. Cadastral surveys are now carried out by the Provincial Land Records and Settlement Departments.

In 1904 attention was drawn to the defective state of the **topographical survey maps**, and a Committee was appointed to report on the subject. To overtake the arrears of revisional survey and to secure that the map of India should be brought up to date and revised at proper intervals, they recommended a considerable increase of establishment and an increased expenditure of £210,000 a year for the next 25 years. They also made recommendations for altering the size and improving the quality of the maps. After further inquiry the Government of India decided that a scale of 1 inch to the mile would ordinarily be sufficient, reserved forests and special areas being surveyed on the scale of 2 inches to the mile, and the $\frac{1}{2}$ -inch scale employed for waste and barren tracts.

Indian Science Congress.

The Indian Science Congress was founded largely owing to the effects of Dr. J. L. Simonsen and Mr. P. S. Macmahon, the present Honorary General Secretaries of the Congress. The Asiatic Society of Bengal undertakes the management of the Congress finances and publishes annually the Proceedings of the Congress. The objects are (1) to encourage research and to make the results generally known among science workers in India, (2) to give opportunities for personal intercourse and scientific companionship and thus to overcome to some extent one of the chief drawbacks in the life of workers in science in India, (3) to promote public interest in science; for this end the Congress is held at different centres annually, and evening lectures open to the public form an important part of the proceedings of each Congress.

The Congress meets in January each year; the proceedings last for six days. The Head of the Local Government is Patron of the Congress: the Congress session is opened by a Presidential Address delivered for the President for the year. The President is chosen annually,

the different sections being represented in turn. The sections are (1) Agriculture (2) Physics and Mathematics, (3) Chemistry, and Applied Botany, (4) Zoology and Ethnography, (5) Botany, (6) Geology, (7) Medical Research. When the sections meet separately each section is presided over by its own President also chosen annually. The mornings are devoted to the reading and discussion of the papers, the afternoons to social functions and visits to places of interests; in the evenings public lectures are delivered.

Government officers whose services can be spared will be granted special leave to attend the Congress and can recover, through the usual channels, the actual train fare paid by them to and from the Congress.—(See Circular Letter from the Government of India, Department of Revenue and Agriculture (General) No. 10171, dated 17th August 1916, embodied in Bombay Government, Education Department, Order No. 2324, dated 14th September 1916).

The **seventh annual meeting** of the Indian Science Congress will be held in Nagpur from January, 13th to 18th, 1920. His Honour Sir Benjamin Robertson, K.C.S.I., K.C.M.G., C.I.E.,

LL.D., I.C.S., Chief Commissioner, Central Provinces, patron of the meeting, and Sir P. C. Ray, Kt., will be president. It is requested that all who wish to attend the meeting will communicate as early as possible with J. L. Simonsen, Esq., Honorary-General Secretary, Forest Research Institute and College, Dehra Dun. The subscription to the Congress will be Rs. 5 and should be paid to the Honorary Treasurer, Asiatic Society of Bengal, 1, Park Street, Calcutta.

The Honorary Local Secretaries will be M. Owen, Esq., College of Science, Nagpur, and V. Bose, Esq., Nagpur, to whom all enquiries as to accommodation should be addressed. It is particularly requested that very early intimation of the accommodation required should be sent to the Honorary Local Secretaries. The following sectional Presidents have been appointed:—Agriculture, Mr. D. Clouston; Physics and Mathematics, Dr. N. F. Moos; Chemistry, Mr. B. K. Singh; Botany, Mr. P. F. Fyson; Zoology, Mr. E. Vicedenburg; Geology, Mr. P. Sampatiengar; Medical Research, Lt.-Colonel J. W. Cornwall, I.M.S.

THE IMPERIAL INSTITUTE.

The Imperial Institute, South Kensington, has been placed by the Imperial Institute (Management) Act of 1916 under the control of the Secretary of State for the Colonies as representing the central authority for the Dominions, Colonies, and Protectorates of the Empire. The actual management of the Institute will be with an executive council of twenty-five members, which, subject to the general control of the Secretary of State for the Colonies, will possess considerable autonomy and will be the governing body of the Institute. India is to be represented on this council by four members, one nominated by the Government of India, two by the Secretary of State for India, and one by the Secretary of State for the Colonies. In addition, it is understood that there will be a special Indian Committee of the Council with co-opted members—an arrangement which will greatly increase the connection of the Institute with Indian interests and, it is hoped, will promote the development of those activities of the Institute for India which are most needed in England.

An account of the work done by the Institute for India, by Dr. W. R. Dunstan, Director of the Imperial Institute, has lately been published in the *Bulletin* of the Institute.

The **Indian Collections** of the Imperial Institute, which have been completely reorganised in recent years, constitute the Indian Section of the Public Exhibition Galleries. They include a representation of the important raw materials of India, illustrations of its chief industries and their results, tabular information and diagrams respecting Indian trade and commerce, maps, pictures, and photographs

of its cities and industries.

Technical Information Bureau.—Ever since the Scientific and Technical Research Department was started, a most important part of its work has been, in addition to conducting researches, to collect and critically collate all published information respecting the production and industrial uses of raw materials, and it has gradually come to be recognized as a central clearing-house for information of this character. Merchants and manufacturers in England, as well as producers in India and the Colonies, have applied in increasing numbers for information on these subjects. In order to be in a position to deal more effectively with such enquiries, a special branch of the department was formed in 1914, whose business it is, in collaboration with the staff of the Scientific and Technical Research Department, to collect and distribute technical information. Since the war this branch, known as the Technical Information Bureau, has been very full of work, and has not only dealt with a large number of inquiries as to Indian materials and their possibilities, but has taken the initiative with British manufacturers and merchants in bringing to their notice important Indian materials which await a new market.

The Institute has a library and map rooms, which are important auxiliaries to this work and publishes quarterly the *Bulletin* which has played a conspicuous part in making known throughout the Empire the results of researches conducted at the Institute, and the records of progress in the various aspects of the production and utilisation of commercial and economic materials.

The Public Trustee.

The **Public Trustee of England** is a Government Official created by Statute (Public Trustee Act, 1906), whereby the State acts as an executor or as a trustee under Wills, and as a trustee under Settlements, whether these instruments are new or old, and in other offices of an analogous character.

The office has been a great success; in the seven years that it has been open the value of the trusts in course of administration have amounted, in round figures, to £50,000,000, while the estimated value of Wills lodged in the Department which have yet to mature is put at some £59,000,000, showing a total value of business of all kinds negotiated at £110,000,000.

Fees chargeable.—The office is now entirely self-supporting and is no charge upon the tax-payer. A provision of the Statute declares that the Office is to make no profit but to charge only such fees as may provide the working expenses and constitute a reserve fund against the liabilities assumed by the State for breach of trust. In accordance with this mutual principle the fees have already been reduced from their original scale, and the cash surplus of fees over expenses, regarded as the nucleus of a reserve fund for all contingencies, is now £14,585.

The main fees are of two kinds—a fee on capital and a fee on income. The fees on capital are taken in two instalments—an instalment of half taken at the beginning, and another instalment of half taken at the end of a trust—each instalment being calculated at the following rates:—

On the first £1,000, fifteen shillings per cent.

On the excess of £1,000 to £20,000, five shillings per cent.

On the excess of £20,000 to £50,000, two shillings and six pence per cent.

On the excess of £50,000, one shilling and three pences per cent. The **Fee on income** is one per cent. if, as is usual, the income be paid direct from its source to the person entitled, on any income in excess of £2,000 a year the fee is only $\frac{1}{2}$ per cent. Where the income is paid through the Department then the fee is two per cent. up to £500 a year, and one per cent. on any excess of £500 a year, and $\frac{1}{2}$ per cent. on income in excess of £2,000 a year. The fee on investment is $\frac{1}{2}$ per cent.; the Public Trustee, out of this fee paying the brokerage. There is power to vary these fees to meet the peculiar circumstances of special cases; but owing to the low range of the fees, and their mutual character the power of reduction is but seldom exercised, except perhaps in the case of large trusts.

The Department has been organised upon lines followed by commercial organisations. Forms are avoided wherever possible, the methods of the Office prescribing prompt attention to all matters within the day.

The particulars of any trust in which it is desired that the Public Trustee should act may be brought to his notice by letter or by personal interview, and upon his assent being obtained, his appointment should be effected in the ordinary way as in the case of private trustees. In the case of a Will about to be made, his appointment can be secured by the simple provision "I appoint the Public Trustee of England as the executor and trustee of this my Will."

One of the forms of trusteeship which would appeal to English people residing in India is a scheme known as a "**Declaration of Trust.**" An official pamphlet explains that the Public Trustee's services have been requested by people who, either because of professional or business pre-occupation, or from want of experience in dealing with money matters, or from the disadvantages which might attach to Governmental, professional or business disabilities abroad, are not well placed to select and supervise their investments. It would appear that the services of the Department in this matter were first requisitioned by officers taking up appointments in India; and, following out their request for individual assistance, this scheme of trust came to be devised, and has been found to commend itself to the circumstances of a very large circle of persons similarly disadvantaged. A Declaration of Trust is an **inexpensive form of trusteeship** by virtue of which the owner practically retains full control over his capital. The property is made over to the Public Trustee either in the form of money to be invested or specific securities transferred into his name; and thereupon the Public Trustee executes a short "declaration" setting out that he holds the money invested or the securities in trust for the transferor. The result of this is that income, as it accrues, is paid to the owner or to any beneficiary as he may direct. A wide field of investment is permissible, as the trust provides that the funds may be invested as the owner may from time to time direct. As the pamphlet sets out interest at the rate of at least 4 per cent. is to be looked for under the scheme from investments of a non-speculative character. It should be understood that this form of trusteeship is not analogous to a bank deposit, where the return of the capital at par, given the solvency of the bank, is expected. Investments are selected with the greatest care in consultation with the owner, but it must be understood that the Public Trustee does not accept responsibility for any fluctuation of any of the investments chosen. The fees payable for this scheme of trusteeship, so far as the capital fees are concerned, are half those payable in the case of an ordinary settlement. The other fees are the same as the ordinary fees.

The appointment of the Public Trustee secures certain definite advantages inasmuch as he is by Act of Parliament a Corporation Sole: and thus it is said the Public Trustee never dies, so that the expense of appointment of other Trustees is permanently avoided. His

integrity is guaranteed by the State, while the measure of his success would indicate that he is necessarily experienced and skilled in his duties.

Close personal attention is given by the Public Trustee and his senior officers to the details of every trust; and as regards the work of investment, a large organisation has been set up to give the best consideration not only to the selection of investments but to the duty of keeping them under frequent observation.

An **Advisory Committee** of men of recognised authority has, in the past year, been appointed by the Lord Chancellor to assist the Public Trustee by a quarterly review of the investments made. In the last Annual Report the Public Trustee speaks of having secured a return of £3-19-4 per cent. upon his trustee investments and a return of £4-10-1 per cent. upon his non-trustee investments.

The success of the Department would seem to show that there is a widespread public need in England for such an Office, and the energy and efficiency with which the Department has been constituted and conducted has been a great factor in commending it to the public. The State Guarantee is also doubtless a factor of great importance. A statutory rule pro-

vides that strict secrecy shall be observed in respect of all trusts administered in the Department.

The administration is subject to an **audit** by the Controller and Auditor-General (the Government Auditor), while the internal organisation has been built up upon the principle of a check and counter-check upon the administration.

An important section of the Statute gives the Public Trustee power to direct an audit and investigation of the condition and accounts of any trust.

Officials in India will doubtless tend to make an increasing use of the Department. As a Government Office, its stability will commend itself to them as a medium to safeguard their interests under Wills or Settlements which can be entirely relied upon, and free from the risks and expense attendant upon any other forms of trusteeship.

Further information upon details and copies of the official pamphlet, reports and rules, etc., can be obtained of the official agents to the Department, *viz.*—Messrs. King, Hamilton & Co., Calcutta and in Bombay, Messrs. King, King & Co., whose head office is Messrs. Henry S. King & Co., 65, Cornhill, London, E. C.

THE ADMINISTRATOR-GENERAL.

In India the functions of a Public Trustee are divided in each Province between two officials, the Administrator-General and the Official Trustee.

The office of **Administrator-General** was first constituted by Indian Act VII of 1849. There were several later enactments on the subject, all of which have ceased to be in force. The present law is to be found in Indian Act III of 1913, which contains the following provisions:—There are three Administrators-General in each of the Presidencies of Bengal, Madras, and Bombay. Their combined jurisdiction covers the whole of British India. The Administrator-General is entitled to letters of administration, when granted by a High Court, unless they are granted to the next of kin. In the other Courts he is entitled to letters in preference to a creditor, a legatee other than a universal legatee, or a friend of the deceased.

If any person who is not an Indian Christian, a Hindu, Mohammedan, Persian, Buddhist dies leaving within any Presidency assets exceeding the value of Rs. 1,000 and if no person to whom any Court would have jurisdiction to commit administration of such assets has, within one month from his death, applied in such Presidency for probate or letters of administration, the Administrator-General is required to apply for letters of administration. In case of apprehended danger of misappropriation, deterioration, or waste of assets left by the deceased in the towns of Calcutta, Madras, and Bombay, the High Courts may direct the Administrator-General to apply for letters of administration. He can also be required to collect and hold assets until a right of succession or administration is determined. Probate and letters of administration granted to an Administrator-

General have effect throughout the Presidency, but the High Court can direct that they have effect throughout one or more of the other Presidencies. A private executor or administrator may with the assent of the Administrator-General transfer the assets of the estate to the Administrator-General. There are provisions in the Act with regard to the revocation of grants and the distribution of assets. When the assets do not exceed Rs. 1,000 in value, the Administrator-General may, when no probate or letters of administration have been granted, give a certificate to a person, claiming otherwise than as a creditor to be interested in such assets, entitling him to receive the assets. There is also power in certain events to give such certificate to a creditor. There is a further power to send the residue of the assets to the country of domicile of the deceased. The Government of India is required by the Act to make good all sums for which the Administrator-General would be personally liable if he had been a private administrator, except where the Administrator-General and his officers have in no way contributed to the liability.

Fees both on capital and on income are payable out of the estates taken charge of by the Administrator-General. The fees on capital vary from 3 per cent. on the gross value in the case of small estates to 2 per cent. in the case of large estates. The fees on income vary in the case of moveable property from 2 per cent. to 3 per cent., and in the case of immovable property from 3 per cent. to 5 per cent. When the Court has directed the Administrator-General to collect and hold the assets a fee of 1 per cent. on the value of the assets taken possession of, collected, realised, or sold is payable. A small fee is also payable in cases where the

Administrator-General grants a certificate. the Administrator has power to reduce the fees to one-half.

Official Trustee.—The office of Official Trustee dates from the year 1843. By Indian Act XVII of that year the Supreme Court had power to appoint the Registrar or other officer of the Court to be a trustee, where there was no trustee willing to act. Act XVII of 1843 was repealed by Act XVII of 1864, which was in its turn repealed by Act II of 1913, which contains the present law on the subject. There are three Official Trustees. The Official Trustee of Bengal has powers in the greater part of India. The powers of the Official Trustee of Bombay extend to the Bombay Presidency and the Province of British Baluchistan; those of the Official Trustee of Madras extend to the Madras Presidency and the Province of Coorg. The Government can appoint Deputy Official Trustees.

An Official Trustee can (a) act as an ordinary trustee, (b) be appointed trustee by a Court of competent jurisdiction. He has, except as otherwise provided, the same powers, duties,

and liabilities as ordinary trustees. He may decline any trust. He may not accept any trust under any composition or scheme of arrangement for the benefit of creditors, nor of any estate known or believed by him to be insolvent. He cannot accept a trust for a religious purpose, or for the management or carrying on of any business. He cannot administer the estate of a deceased person unless he be sole executor and sole trustee under the will. He cannot be appointed trustee along with any other person. With his consent he may be appointed trustee in the instrument making the trust, and he may accept a trust contained in a will. When property is subject to a trust, and there is no trustee within the jurisdiction willing or capable to act, the High Court may appoint the Official Trustee as trustee. He may also be appointed a trustee by the surviving or continuing trustees of a trust, and all persons beneficially interested therein.

As in the case of an Administrator-General, the Government of India is responsible for the acts or defaults of an Official Trustee. Fees are payable at rates fixed by the Government.

PROVING OF WILLS.

In British India if a person has been appointed executor of the will of a deceased person, it is always advisable to prove the will as early as possible. If the will is in a vernacular it has to be officially translated into English. A petition is then prepared praying for the grant of probate of the will. All the property left by the deceased has to be disclosed in a schedule to be annexed to the petition. The values of immoveable properties are usually assessed at 16½ years purchase on the nett Municipal assessment. For estate under Rs. 10,000 the probate duty payable is 2%; between Rs. 10,000 and Rs. 50,000 the duty payable is 2½%. Over 50,000 rupees the duty payable is 3%. In determining the amount of the value of the estate for the purposes of probate duty the following items are allowed to be deducted:—

1. Debts left by the deceased including mortgage encumbrances.
2. The amount of funeral expenses.
3. Property held by the deceased in trust and not beneficially or with general power to confer a beneficial interest.

The particulars of all these items have to be stated in a separate schedule. It is the practice of the High Court to send a copy of these schedules to the Revenue authorities and if the properties particularly immoveable properties have not been properly valued, the Revenue department require the petition to be amended accordingly. In certain cases the Court then requires citations to be published and served on such persons as the Court thinks are interested in the question of the grant of probate. If no objection is lodged by any person so interested within 14 days after the publication or service of citation and if the will is shown to have been properly executed and the petitioner entitled to probate, probate is ordered to be granted.

Freemasonry in India.

In 1728 a deputation was granted by the Grand Lodge of England to Geo. Pomfrett, Esq., authorising him to "open a new Lodge in Bengal." Of this personage nothing further is known but under Capt. Farwinter, who in the following year succeeded him as Provincial Grand Master of India, Lodge was established in 1730, which in the Engraved Lists is distinguished by the arms of the East India Company, and is described as "No. 72 at Bengal in the East Indies." The next Provincial Grand Masters were James Dawson and Zech. Gee, who held office in 1740; after whom came the Hon. Roger Drake, appointed 10th April 1755. The last named was Governor of Calcutta at the time of the attack made on the settlement by Surajah Dowlah in 1756. Drake missed the horrors of the Black Hole by escaping and was accused of deserting his post, but, though present at the retaking of Calcutta by Admiral Watson and Clive, it is improbable that he resumed the duties of his masonic office after the calamity that befell the settlement.

The minutes of the Grand Lodge inform us that William Mackett, Provincial Grand Master of Calcutta, was present at the meeting of that body November 17th, 1760, and we learn on the same authority that at the request of the "Lodges in the East Indies" Mr Cullin Smith was appointed P. G. M. in 1762. At this period it was the custom in Bengal "to elect the Provincial Grand Master annually by the majority of the votes of the members present, from amongst those who passed through the different offices of the (Prov.) Grand Lodge and who had served as Dep. Prov. Grand Master." This annual election as soon as notified to the Grand Lodge of England was confirmed by the Grand Master without its being thought an infringement of his prerogative. In accordance with this practice, Samuel Middleton was elected (P. G. M. circa) in 1767; but in passing it may be briefly observed that a few years previously a kind of roving commission was granted by Earl Ferrars in 1762-64 to John Bluvitt, Commander of the "Admiral Watson," Indian "for East India where no other Provincial Lodge is to be found." Middleton's election was confirmed October 31st, 1768, and, as the dispensation forwarded by the Grand Secretary was looked upon as abrogating the practice of annual elections, he accordingly held the office of D. G. M. Unfortunately the records of the P. G. L. date back only to 1774, and thus much valuable information is lost to us. This Grand Lodge continued working until 1792 when it ceased to meet. It seems that the officers were selected from only two Lodges much to the dissatisfaction of the other Lodges, and resulted in most of the dissatisfied bodies seceding and attaching themselves to the Athol of Ancient Grand Lodge. In 1813 at the Union both the Ancients and Moderns in Calcutta combined and gave their allegiance to the **United Grand Lodge of England** and have since been working peaceably under the Provincial Grand Lodge of Bengal which was revived in that year and in 1840 created a District Grand Lodge.

Madras.—The earliest Lodge in Southern India (No. 222) was established in Madras in 1752. Three others were also established about 1766.

In the same year Capt. Edmund Pascal was appointed P. G. M. for Madras and its Dependencies and in the following year another Lodge was established at Fort St. George. In 1768 the Athol (or Ancients) invaded this District and in 1782 established a Provincial Grand Lodge and both these Provincial Grand Bodies continued working peaceably side by side until the union. Indeed, though not generally known, these two Grand Bodies made an attempt at coalition long before any such movement was made by their parent bodies, the Grant Lodge of England, and the Ancient Grand Lodge, and Malden in his History of Freemasonry in Madras states that in a great measure they succeeded. At the Union in 1813 all the bodies in Madras gave their allegiance to the United Grand Lodge. One event worthy of note was the initiation in 1776 at Trichinopoly of the eldest son of the Nawab of Arcot, Undat-ul-Amari, who in his reply to the congratulations of the Grand Lodge of England stated "he considered the title of English Mason as one of the most honourable that he possessed." This document is now stored in the archives of the United Grand Lodge.

Bombay.—Two Lodges were established in this Presidency during the 17th century, Nos. 234 at Bombay in 1758 and 569 in Surat in 1798, both of which were carried on the lists until the union when they disappeared. A Provincial Grand Master, James Todd, was appointed but there is no record that he exercised his functions and his name drops out of the Freemasons' Calendar in 1799. In 1801 an Athol Warrant was granted (No. 322) to the 78th foot which was engaged in the Maratha War under Sir Arthur Wellesley. In 1818 Lord Moria was asked to constitute a Lodge to be known by the name of St. Andrew by eight Masons residing there and also to grant a dispensation for holding a Provincial Grand Lodge for the purpose of making the Hon. Mountstuart a Mason, he having expressed a wish to that effect. The Petitioners further requested "that his name might be inserted in the body of the warrant, authorising them to instal him after being duly passed and raised a Deputy Grand Master of the Decan. Of the reply to this application no copy has been preserved. Lodge Benevolence was established in Bombay in 1822.

In 1823 a Military Lodge "Orion-in-the-West" was formed in the Bombay Artillery and installed at Poona as No. 15 of the coast of Coromandel. It seems from Lane's records that in 1830 it was discovered that this Lodge was not on the records of the United Grand Lodge of England. A Warrant was subsequently issued bearing date 19th July 1833. According to the early proceedings of this Lodge, members were examined in the Third Degree and passed to the chair in the Fourth Degree for which a fee of three gold mohurs was charged. In the following year a second Lodge was established at Poona by the Provincial Grand Lodge of Bengal which however left no trace of its existence. In 1825 the civilian element of "Orion" seceded and formed the "Lodge of Hope" also at Poona No. 802.

Here "Orion" unrecognized at home, aided in the secession of some of its members, who ob-

tained a warrant, on the recommendation of the parent Lodge, from the Grand Lodge of England. Two years later it was discovered that no notification of the existence of "Orion in-the-West" had reached England, nor had any fees been received, although these including quarterages had been paid into the Provincial Grand Lodge, Coast of Coromandel. It was further ascertained that in granting a warrant for a Bombay Lodge the Provincial Grand Master of Coromandel had exceeded his powers. Ultimately a new warrant No. 598 was granted as already stated in 1833. Lodge "Perseverance" was started in Bombay No. 818 in 1828. Up to this time the jurisdiction of the Grand Lodge of England in India had not been invaded; but in 1836 Dr. James Burnes was appointed by the Grand Lodge of Scotland, P. G. M. of Western India and its Dependencies. No Provincial Grand Lodge however was formed until 1st January 1838. A second Scottish Province of Eastern India was started which on the retirement of the Marquis of Tweeddale was absorbed within the jurisdiction of Dr. Burnes, who in 1846 became Provincial Grand Master for all India (including Aden) but with the proviso, that this appointment was not to act in restraint of any future sub-division of the Presidencies. Burnes may be best described as being in 1836, in ecclesiastical phrase as a Provincial Grand Master "in partibus infidelium" for whatever Lodges then existed throughout the length and breadth of India were strangers to Scottish Masonry. But the times were propitious. There was no English Provincial Grand Lodge in Bombay and the Chevalier Burnes, whom nature had endowed with all the qualities requisite for Masonic Administration, soon got to work and presented such attractions to **Scottish Freemasonry** that the strange sight was witnessed of English Masons deserting their mother Lodges, to such an extent that these fell into abeyance, in order to give support to Lodges newly constituted under the Grand Lodge of Scotland. In one case indeed, a Lodge "Perseverance" under England went over bodily to Scotland, with its name, jewels, furniture, and belongings, and the charge was accepted by Scotland. This Lodge still exists in Bombay and now bears No. 333 on the Register of Scotland. From this period, therefore, Scottish Masonry flourished, and English Masonry declined until the year 1848 when a Lodge St. George No. 807 on the Rolls of the Grand Lodge of England was again formed at Bombay, and for some years was the solitary representative of English Masonry in the Province. In 1844 Burnes established a Lodge "Rising Star" at Bombay for the **admission of Indian gentlemen** the result of which is seen at the present day. Thus the seed planted at Trichinopoly in 1776 by the initiation of Andat-ul-Amari has borne fruit, resulting in the initiation of thousands of Indian gentlemen of all castes and creeds, and which has gone far to establishing that mutual trust between West and East, a distinguishing characteristic of Speculative Freemasonry. A Provincial Grand Lodge was re-established in Bombay in 1860, and converted into a District Grand Lodge in 1871.

The **Grand Lodge of Ireland** granted a warrant to establish a Lodge at Kurnal in 1837, but it was short lived. An attempt was made in 1869 to establish a Lodge in Bombay, but on the representation of the Grand Secretary of England, to the Deputy Grand Secretary of

Ireland that it would be objectionable to create a third masonic jurisdiction in the Province, there being two already, viz., English and Scottish, the Grand Lodge of Ireland decline to grant the warrant. In 1911, however, a warrant was sanctioned for the establishment of Lodge "St. Patrick" and since that year two other Lodges have sprung into being.

The Grand Lodge of England—All three Constitutions of the United Kingdom, the United Grand Lodge of England, the Grand Lodge of Ireland and the Grand Lodge of Scotland hold jurisdiction in India. By far the largest is the first; the next largest is the third and the number of Lodges under Ireland is as yet small. The Grand Lodge of England divides its rule under Five District Grand Masters independent of each other and directly subordinate to the Grand Master of England by whom they are appointed.

Bengal.

- 80 Lodges. The Earl of Ronaldshay, G.C.I.E., District Grand Master.

Madras.

- 31 Lodges. The Hon. L. E. Buckley, C.S.I., District Grand Master.

Bombay.

- 48 Lodges. W. A. Haig-Brown, J.P., Hon. Mag., District Grand Master.

Punjab.

- 31 Lodges. Col. H. T. Pease, C.I.E., District Grand Master.

Burma.

- 14 Lodges. The Hon. E. W. Ormond, District Grand Master.

—
204

The Grand Lodge of Ireland has no District Grand Master in India at present, the Lodges corresponding direct with the Grand Lodge in Dublin. There are ten Lodges, 4 in Calcutta, 3 in Ceylon and 3 in Bombay.

The Grand Lodge of Scotland exercises its rule through a Grand Master of all Scottish Freemasonry in India, who is elected by the Brethren subject to confirmation by the Grand Master Mason of Scotland, Maj. Gen. W. E. Jennings, C.I.E., the present incumbent of the office, controls 56 Lodges.

Royal Arch Masonry—Under England, the District Grand Master in any District is nearly always created also Grand Superintendent, his Deputy as Second and another Companion as Third Principal.

Under Ireland there is no local jurisdiction and under Scotland the office is elective subject to confirmation.

The five English Districts are constituted as under :—

Bengal.

- 27 Chapters. The Earl of Ronaldshay, G.C.I.E., Grand Superintendent.

Madras.

- 15 Chapters. The Hon. Mr. L. E. Buckley, C.S.I., Grand Superintendent.

Bombay.

Chapters. W. A. Haig-Brown, J.P., Hon. Mag., Grand Superintendent.

Punjab.

18 Chapters. Col. H. T. Pease, C.I.E., P.A. G. Soj. (Eng.), Grand Superintendent.

Burma.

6 Chapters. The Hon. Mr. E. W. Ormond, Grand Superintendent.

87

There is one Irish Chapter in Calcutta.

The present Grand Superintendent of R. A. Masonry under Scotland is the Hon. Maj. Gen. W. E. Jennings, C.I.E., and there are 29 Chapters.

Mark Masonry—Under England, Mark Masonry is worked under the Grand Mark Lodge of England and Wales, and divided into separate Districts; but in most cases the District Grand Master is also District Grand Mark Master.

Bengal.

26 Lodges. R. W. Bro. D. L. Johnston, I.C.S., D. Grand Master.

Bombay.

14 Lodges. W. A. Haig-Brown, J.P., Hon. Mag., D. Grand Master.

Madras.

13 Lodges. The Hon. L. E. Buckley, C.S.I., D. Grand Master.

Punjab.

14 Lodges. Col. H. T. Pease, C.I.E., D. Grand Master.

Burma.

6 Lodges. Arthur Blake, District Grand Master.

The Mark degree is incorporated with the Royal arch degree in Irish Chapters. Mark degree is worked in some S. C. Lodges, but mostly in R. A. Chapters, in which the Excellent R.A.M. and other degrees can be obtained. S. C. Chapters insist upon candidates being Mark

Master Masons before exaltation. Mark degree in Craft Lodges is conferred by the Rt. Wor. Master in S. C. Craft does not recognise the ceremony of Rt. W. Mark Master. This is confined strictly to Chapters. Such Chapter has a Lodge of M. M. M. working under its charter. Separate charters for Mark Lodges are only issued by the G. Chapter of Scotland.

Other Degrees.—There are many side degrees worked in India, of the Antient and Accepted Rite, no degree higher than the 18° is worked in India under England, but under Scotland the 30° is worked. The Knight Templar Degree is also worked in several places under both English and Scottish jurisdiction. There are fourteen 18th Degree Chapters working in India.

Roman Eagle Conclave No. 43, Bombay.

St. Mary's Commandery No. 43, Bombay.

R. A. Mariner, 72, 514 and 662, Bombay.

R. A. Mariner, 61, 81, 82, and 106, Madras.

Secret Monitor, 14, 21, 34, 37, 40 and 42, Madras.

Benevolent Associations.—Each District works its own benevolent arrangements which include the Relief of Distressed Masons, educational provision for the children of Masons and maintenance provision for widows in poor circumstances.

All information will be given to persons entitled by the District Grand Secretary in each District. The names and addresses of **District Grand Secretaries** are given below :—

D. G. S., Bengal.

J. A. Dolton, 19, Park Street, Calcutta.

D. G. S., Bombay.

J. F. Pennock, V.D., P.A.G.D.C. (Eng.), Kings Buildings, Fort, Bombay.

D. G. S., Burma.

W. Kendall, 4, Hume Road, Rangoon.

D. G. S., Madras.

C. M. Maduranayakam Pillai, Freemason's Hall, Egmore, Madras.

D. G. S., Punjab.

David E. Johnston, P.G. St. B. (Eng) Freemasons' Hall, Lahore.

Indian Architecture.

I. ANCIENT.

The architecture of India has proceeded on lines of its own, and its monuments are unique among those of the nations of the world. An ancient civilization, a natural bent on the part of the people towards religious fervour of the contemplative rather than of the fanatical sort, combined with the richness of the country in the sterner building materials—these are a few of the factors that contributed to making it what it was, while a stirring history gave it both variety and glamour. Indian architecture is a subject which at the best has been studied only imperfectly, and a really comprehensive treatise on it has yet to be written. The subject is a vast and varied one, and it may be such a treatise never will be written in the form of one work at any rate. The spirit of Indian art is so foreign to the European of art culture that it is only one European in a hundred who can entirely understand it, while art criticism and analysis is a branch of study that the modern Indian has not as yet ventured upon to any appreciable extent. Hitherto the one, and with a few exceptions the only recognized authority on the subject has been Fergusson, whose compendious work is that which will find most ready acceptance by the general reader. But Fergusson attempted the nearly impossible task of covering the ground in one volume of moderate dimensions, and it is sometimes held that he was a man of too purely European a culture, albeit wide and eclectic, to admit of sufficient depth of insight in this particular direction. Fergusson's classification by races and religions is, however, the one that has been generally accepted hitherto. He asserts that there is no stone architecture in India of an earlier date than two and a half centuries before the Christian era, and that "India owes the introduction of the use of stone for architectural purposes, as she does that of Buddhism as a state religion, to the great Asoka, who reigned B.C. 272 to 236."

Buddhist Work.

Fergusson's first architectural period is then the Buddhist, of which the great tope at Sanchi with its famous Northern gateway is perhaps the most noted example. Then we have the Gandharan topes and monasteries. Perhaps the examples of Buddhist architecture of greatest interest and most ready access to the general student are to be found in the Chaitya halls or rock-cut caves of Karli, Ajunta, Nasik, Ellora and Kanheri. A point with relation to the Gandhara work may be alluded to in passing. This is the strong European tendency, variously recognized as Roman, Byzantine but most frequently as Greek, to be observed in the details. The foliage seen in the capitals of columns bears strong resemblance to the Greek acanthus, while the sculptures have a distinct trace of Greek influence, particularly in the treatment of drapery, but also of hair and facial expression. From this it has been a fairly common assumption amongst some authorities that Indian art owed much of its best to European influence, an assumption that is strenuously combated by others as will be pointed out later.

The architecture of the Jainas comes next in order. Of this rich and beautiful style the most noted examples are perhaps the Dilwara temples near Mount Abu, and the unique "Tower of Victory" at Chittore.

Other Hindu Styles.

The Dravidian style is the generic title usually applied to the characteristic work of the Madras Presidency and the South of India. It is seen in many rock-cut temples as at Ellora, where the remarkable "Kylas" is an instance of a temple cut out of the solid rock, complete, not only with respect to its interior (as in the case of mere caves) but also as to its exterior. It is, as it were, a life-size model of a complete building or group of buildings, several hundred feet in length, not built, but sculptured in solid stone, an undertaking of vast and, to our modern ideas, unprofitable industry. The Pagoda of Tanjore, the temples at Srirangam, Chidambaram, Vellore, Vijayanagar, &c., and the palaces at Madura and Tanjore are among the best known examples of the style.

The writer finds some difficulty in following Fergusson's two next divisions of classification, the "Chalukyan" of South-central India, and the "Northern or Indo-Aryan style." The differences and the similarities are apparently so intermixed and confusing that he is fain to fall back on the broad generic title of "Hindu"—however unscientific he may thereby stand confessed. Amongst a vast number of Hindu temples the following may be mentioned as particularly worthy of study:—Those at Mukteswara and Bhuvaneshwar in Orissa, at Khajuraho, Bindraban, Udaipur, Benares, Gwalior, &c. The palace of the Hindu Raja Man Singh at Gwalior is one of the most beautiful architectural examples in India. So also are the palaces of Amber, Ditiya, Urcha, Dig and Udaipur.

Indo-Saracenic.

Among all the periods and styles in India the characteristics of none are more easily recognizable than those of what is generally called the "Indo-Saracenic" which developed after the Mahomedan conquest. Under the new influences now brought to bear on it the architecture of India took on a fresh lease of activity and underwent remarkable modifications. The dome, not entirely an unknown feature hitherto, became a special object of development, while the arch, at no time a favourite constructional form of the Hindu builders, was now forced on their attention by the predilections of the ruling class. The minaret also became a distinctive feature. The requirements of the new religion,—the mosque with its wide spaces to meet the needs of organized congregational acts of worship—gave opportunities for broad and spacious treatments that had hitherto been to some extent denied. The Moslem hatred of idolatry set a tabu on the use of sculptured representations of animate objects in the adornment of the buildings, and led to the development

of other decorative forms. Great ingenuity came to be displayed in the use of pattern and of geometrical and foliated ornament. This Moslem trait further turned the attention of the builders to a greater extent than before to proportion, scale and mass as means of giving beauty, mere richness of sculptured surface and the aesthetic and symbolic interest of detail being no longer to be depended on to the same degree.

The art was thus the gainer by the new conditions. It gained in power and variety much as "Classic" architecture gained under the Romans. But it equally lost something too. The Indo-Saracenic is apt to appear cold and hard. The writer was impressed by this on his first view of the Gwalior palace already mentioned. Though a Hindu building that palace has yet much of what might be called the more sophisticated quality of the Indo-Saracenic work as well as some similarity of detail. It has, being Hindu, a certain amount of sculptured ornament of animated forms, and the general effect of roundness, richness and interest thereby imparted seemed eloquent in suggestion as to what is lacking in so many of the Mahometan buildings.

Foreign Influence.

There would appear to be a conflict between archaeologists as to the extent of the effect on Indian art produced by foreign influence under the Mahometans. The extreme view on the one hand is to regard all the best of the art as having been due to foreign importation. The Gandharan sculptures with their Greek tendency, the development of new forms and modes of treatment to which allusion has been made, the similarities to be found between the Mahometan buildings of India and those of North Africa and Europe, the introduction of the minaret and, above all, the historical evidences that exist of the presence in India of Europeans during Mogul times, are cited in support of the theory. On the other hand those of the opposite school hold the foregoing view to be due to the prevailing European preconception that all light and leading must come by way of Europe, and the best things in art by way of Greece. To them the Gandharan sculpture, instead of being the best, is the worst in India even because of its Greek tincture. They find in the truly indigenous work beauties and significances not to be seen in the Graeco-Bactrian sculptures, and point to those of Borobuder in Java, the work of Buddhist colonists from India, wonderfully preserved by reason of an immunity from destructive influences given by the insular position, as showing the best examples of the art extant. It is probable that a just estimate of the merits of the controversy, with respect to sculpture at any rate, cannot be formed till time has obliterated some of the differences of taste that exist between East and West.

To the adherents of the newer school the undisputed similarities between Indo-Mahometan and Hindu buildings outweigh those between Indian and Western Mahometan work, especially in the light of the dissimilarities between the latter. They admit the changes produced by the advent of Islam,

but contend that the art, though modified, yet remained in its essence what it had always been, indigenous Indian. The minaret, the dome, the arch, they contended, though developed under the Moslem influence, were yet, so far as their detailed treatment and craftsmanship are concerned, rendered in a manner distinctively Indian. Fergusson is usually regarded as the leader of the former school, while the latter and comparatively recent school has at present found an eager champion in Mr. E. B. Havell, whose works, on the subject are recommended for study side by side with those of the former writer. Mr. Havell practically discards Fergusson's racial method of classification into styles in favour of a chronological review of what he regards to a greater extent than did his famous precursor as being one continuous homogeneous Indian mode of architectural expression, though subject to variations from the influences brought to bear upon it and from the varied purposes to which it was applied.

Agra and Delhi.

Agra and Delhi may be regarded as the principal centres of the Indo-Saracenic style—the former for the renowned Taj Mahal, for Akbar's deserted capital of Fatehpur Sikri, his tomb at Secundra, the Moti Musjid and palace buildings at the Agra fort. At Delhi we have the great Jumma Musjid, the Fort, the tombs of Humayon, Sufdar Jung, &c.; and the unique Quth Minar. Two other great centres may be mentioned, because in each there appeared certain strongly marked individualities that differentiated the varieties of the style there found from the variety seen at Delhi and Agra, as well as that of one from that of the other. These are Ahmedabad in Gujarat and Bijapur on the Dekhan, both in the Bombay Presidency.

Ahmedabad.

At Ahmedabad with its neighbours Sirkhej and Champanir there seems to be less of a departure from the older Hindu forms, a tendency to adhere to the lintel and bracket rather than to have recourse to the arch, while the dome though constantly employed, was there never developed to its full extent as elsewhere, or carried to its logical structural conclusion. The Ahmedabad work is probably most famous for the extraordinary beauty of its stone "jali"—or pierced lattice-work, as in the palm tree windows of the Sidi Sayyid Musjid.

Bijapur.

The characteristics of the Bijapur variety of the style are equally striking. They are perhaps more distinctively Mahomedan than those of the Ahmedabad buildings in that here the dome is developed to a remarkable degree, indeed the tomb of Mahmud—the well-known "Gol Gumbaz"—is cited as shewing the greatest space of floor in any building in the world roofed by a single dome, not even excepting the Pantheon. The lintel also was here practically discarded in favour of the arch. The Bijapur style shows a bold masculine quality and a largeness of structural conception that is unequalled elsewhere in India; though in richness and delicacy it does not attempt to rival the work of the further North. In this we recognize among other influences

that of the prevailing material, the hard uncompromising Dekhan basalt. In a similar manner the characteristics of the Ahmedabad work with its greater richness of ornamentation are bound up with the nature of the Gujarat freestone, while at Delhi and Agra the freer

choice of materials available—the local red and white sandstones, combined with access to marble and other more costly materials—was no doubt largely responsible for the many easily recognizable characteristics of the architecture of these centres.

II. MODERN.

The modern architectural work of India divides itself sharply into two classes. There is first that of the indigenous Indian "Master-builder" to be found chiefly in the Native States, particularly those in Rajputana. Second there is that of British India, or of all those parts of the peninsula wherever Western ideas and methods have most strongly spread their influence, chiefly, in the case of architecture, through the medium of the Department of Public Works. The work of that department has been much animadverted upon as being all that building should not be, but, considering it has been produced by men of whom it was admittedly not the *metier*, and who were necessarily contending with lack of expert training on the one hand and with departmental methods on the other, it must be conceded that it can show many notable buildings. Of recent years there has been a tendency on the part of professional architects to turn their attention to India, and a number of these has even been drafted into the service of Government as the result of a policy initiated in Lord Curzon's Viceroyalty. In time, therefore, and with the growth of the influence of these men, such of the reproach against the building of the British in India as was just and was not merely thoughtlessly maintained as a corollary to the popular jape against everything official, may gradually be removed. If this is so as to Government work progress should be even more assured in the freer atmosphere outside of official life. Already in certain of the greater cities, where the trained modern architect has established himself, in private practice, there are signs that his influence is beginning to be felt. He still complains, however, that the general public of India needs much educating up to a recognition of his value, both in a pecuniary sense and otherwise. It is also to be observed that the survival of a relic of the popular idea of the time before his advent, to the effect that though an architect might occasionally "design" a building it was always an engineer who built it, is still indicated by the architect in some cases deeming it advisable to style himself "architect and engineer."

To the work of the indigenous "master-builder" public attention has of recent years been drawn with some insistence, and the suggestion has been pressed that efforts should be directed towards devising means for the preservation of what is pointed out—and now universally acknowledged—to be a remarkable survival—almost the only one left in the world—of "living art," but which is threatened with gradual extinction by reason of the spread of Western ideals and fashions. The matter assumed some years ago the form of a mild controversy centring round the question of the

then much discussed project of the Government of India's new capital at Delhi. It was urged that this project should be utilised to give the required impetus to Indian art rather than that it should be made a means of fostering European art which needed no such encouragement at India's expense. The advocates of this view appear for the most part to have been adherents of the "indigenous Indian" school of archaeologists already mentioned, and to have based their ideas on their own reading of the past. They still muster a considerable following not only amongst the artistic public of England and India, but even within the Government services. Their opponents, holding what appears to be the more official view both as to archaeology and art, have pointed to the "death" of all the arts of the past in other countries as an indication of a natural law, and deprecate as waste of energy all efforts to resist this law, or to institute what they have termed "another futile revival." The British in India they contend, should do as did the ancient Romans in every country on which they planted their conquering foot. As those were wont to replace indigenous art with that of Rome, so should we set our seal of conquest permanently on India by the erection of examples of the best of British art. This is the view which, as we have indicated, appears to have obtained for the moment the more influential hearing, and the task of designing and directing the construction of the principal buildings in the new Capital has accordingly been entrusted jointly to a London and to a South African architect, neither of whom can be unduly influenced by either past or recent architectural practice so far as India is concerned.

The results cannot but be awaited with the keenest interest, and meanwhile the controversy, with suspended judgment, naturally falls into abeyance. It is, moreover, however vital to the interests of the country's architecture, too purely technical and academic for its merits to be estimated by the general reader or discussed here. Its chief claim on our attention has in the fact that it affords an added interest to the tourist, who may see the fruits of both schools of thought in the various modern buildings of British India as well as examples of the "master builders" work in nearly every native town and bazaar. The town of Lashkar in Gwalior State may be cited as peculiarly rich in instances of picturesque modern Indian street architecture, while at Jaipur, Udaipur, Benares, etc., this class of work may be studied in many different forms both civil and religious. The extent to which the "unbroken tradition from the past" exists may there be gauged by the traveller who is architect enough for the purpose.

Archæology.

The archæological treasures of India are as varied as they are numerous. Those of the pre-Muhammadan period may roughly be divided into (1) architectural and sculptural monuments and (2) inscriptions. No building or sculpture in India with any pretensions to be considered an example of architecture or art can be ascribed to a time earlier than that of Asoka (circa 250 B.C.). In the pre-Asoka architecture of India, as in that of Burma or China at the present day, wood was solely or almost solely employed. Even at the close of the 4th century, B.C., Megasthenes, the Greek Ambassador at the court of Chandragupta, grandfather of Asoka, describes Pataliputra, the capital of the Indian monarch, as "surrounded by a wooden wall pierced with loop-holes for the discharge of arrows." If the capital itself was thus defended, we can easily infer that the architecture of the period was wooden. And long long after stone was introduced the lithic styles continued to be influenced by, or copied from, the wooden.

Monumental Pillars.—The first class of works that we have to notice are the monumental pillars, known as *lats*. The oldest are the monolithic columns of Asoka, nearly thirty in number, of which ten bear his inscriptions. Of these the Lauriya-Nandangarh column in the Champaran District, Tirhut, is practically uninjured. The capital of each column, like the shaft, was monolithic, and comprised three members, *viz.*, a Persepolitan bell, abacus, and crowning sculpture in the round. By far the best capital of Asoka's time was that exhumed at Sarnath near Benares. The four lions standing back to back on the abacus are carved with extraordinary precision and accuracy. Of the post-Asokan period one pillar (B.C. 150) stands to the north-east of Benagar in the Gwalior State, another in front of the cave of Karli (A.D. 70), and a third at Eran in Central Provinces belonging to the 5th Century, A. D. All these are of stone; but there is one of iron also. It is near the Qutb Minar at Delhi, and an inscription on it speaks of its having been erected by a king called Chandra, identified with Chandragupta II. (A.D. 375-413) of the Gupta dynasty. It is wonderful "to find the Hindus at that age forging a bar of iron larger than any that have been forged even in Europe to a very late date, and not frequently even now." Pillars of later style are found all over the country, especially in the Madras Presidency. No less than twenty exist in the South Kanara District. A particularly elegant example faces a Jaina temple at Mudabidri, not far from Mangalore.

Topes.—*Stupas*, known as *dagabas* in Ceylon and commonly called *Topes* in North India, were constructed either for the safe custody of relics hidden in a chamber often near the base or to mark the scene of notable events in Buddhist or Jaina legends. Though we know that the ancient Jains built *stupas*, no specimen of Jaina *stupas* is now extant. Of those belonging to the Buddhists, the great Tope of Sanchi in Bhopal, is the most intact and entire of its class. It consists of a low circular drum supporting a hemispherical dome of less diameter. Round the drum is an open passage for circum-

ambulation, and the whole is enclosed by a massive stone railing with lofty gates facing the cardinal points. The gates are essentially wooden in character, and are carved, inside and out, with elaborate sculptures. The *stupa* itself probably belonged to the time of Asoka, but as Sir John Marshall's recent explorations have conclusively shown, the railing and the gateways were at least 150 and 200 years later, respectively. Other famous Buddhist *stupas* that have been found are those of Bharhut between Allahabad and Jubbulpore, Amravati in the Madras Presidency, and Piprahwa on the Nepalese frontier. The tope proper at Bharhut has entirely disappeared, having been utilised for building villages, and what remained of the rail has been removed to the Calcutta Museum. The bas-reliefs on this rail which contain short inscriptions and thus enable one to identify the scenes sculptured with the *Jatakas* or Birth Stories of Buddha give it a unique value. The *stupa* at Amravati also no longer exists, and portions of its rail, which is unsurpassed in point of elaboration and artistic merit, are now in the British and Madras Museums. The *stupa* at Piprahwa was opened by Mr. W. C. Peppe in 1898, and a steatite or soap-stone reliquary with an inscription on it was unearthed. The inscription, according to many scholars, speaks of the relics being of Buddha and enshrined by his kinsmen, the Sakyas. And we have thus here one of the *stupas* that were erected over the ashes of Buddha immediately after his demise.

Caves.—Of the rock excavations which are one of the wonders of India, nine-tenths belong to Western India. The most important groups of caves are situated in Bhaja Bedsa, Karli, Kanheri, Junnar, and Nasik in the Bombay Presidency, Ellora and Ajanta in Nizam's Dominions, Barabar 16 miles north of Gaya, and Udayagiri and Khandagiri 20 miles from Cuttack in Orissa. The caves belong to the three principal sects into which ancient India was divided, *viz.*, the Buddhists, Hindus and Jains. The earliest caves so far discovered are those of Barabar which were excavated by Asoka and his grandson Dasaratha, and dedicated to Ajivikas, a naked sect founded by Makkhali Gosala. This refutes the theory that cave architecture was of Buddhist origin. The next earliest caves are those of Bhaja, Pitalkhora and cave No. 9 at Ajanta and No. 19 at Nasik. They have been assigned to 200 B.C. by Fergusson and Dr. Burgess. But there is good reason to suppose from Sir John Marshall's recent researches and from epigraphic considerations that they are considerably more modern. The Buddhist caves are of two types—the *chaityas* or chapel caves and *viharas* or monasteries for the residence of monks. The first are with vaulted roofs and horse-shoe shaped windows over the entrance and have interiors consisting of a nave and side aisles with a small *stupa* at the inner circular end. They are thus remarkably similar to Christian basilicas. The second class consist of a hall surrounded by a number of cells. In the later *viharas* there was a sanctum in the centre of the back wall containing a large image of Buddha. Hardly a *chaitya* is found without one or more *viharas* adjoining it. Of the Hindu cave tem-

ples that at Elephanta near Bombay is perhaps the most frequented. It is dedicated to Siva and is not earlier than the 7th century A.D. But by far the most renowned cave-temple of the Hindus is that known as Kailasa at Ellora. It is on the model of a complete structural temple but carved out of solid rock. It also is dedicated to Siva and was excavated by the Rashtrakuta king, Krishna I, (A. D. 768), who may still be seen in the paintings in the ceilings of the upper porch of the main shrine. Of the Jaina caves the earliest are at Khandgiri and Udayagiri; those of the mediæval type, in Indra Sabha at Ellora; and those of the latest period, at Ankai in Nasik. The ceilings of many of these caves were once adorned with fresco paintings. Perhaps, the best preserved among these are those at Ajanta, which were executed at various periods between 350-650 A.D. and have elicited high praise as works of art. Copies were first made by Major Gill, but most of them perished by fire at the Crystal Palace in 1866. The lost ones were again copied by John Griffiths of the Arts School, Bombay, half of whose work was similarly destroyed by a fire at South Kensington. They were last copied by Lady Herringham during 1909-11. Her pictures, which are in full scale, are at present exhibited at the Indian Section of the Victoria and Albert Museum, South Kensington, and have been reproduced in a volume brought out by the India Society.

Gandhara Monuments.—On the north-west frontier of India, anciently known as Gandhara, are found a class of remains, ruined monasteries and buried *stupas*, among which we notice for the first time representations of Buddha and the Buddhist pantheon. The free use of Corinthian capitals, friezes of nude Erotes bearing a long garland, winged Atlantes without number, and a host of individual motifs clearly establish the influence of Hellenistic art. The mound at Peshawar, locally known as Shah-ji-ke-Dheri, which was explored in 1909, brought to light several interesting sculptures of this school together with a reliquary casket, the most remarkable bronze object of the Gandhara period. The inscription on the casket left no doubt as to the mound being the *stupa* raised over the bones of Buddha by the Indo-Scythian king Kanishka. They were presented by Lord Minto's Government to the Buddhists of Burma and are now enshrined at Mandalay. To about the same age belong the *stupas* at Manikyala in the Punjab opened by Ranjit Singh's French Generals, Ventura and Court, in 1830. Some of them contained coins of Kanishka.

Structural Temples.—Of this class we have one of the earliest examples at Sanchi, and another at Tigowa in the Central Provinces. In South India we have two more examples, *viz.*, Lad Khan and Durga temples at Aihole in Bijapur. All these belong to the early Gupta period and cannot be later than 500 A.D. The only common characteristic is flat roofs without spires of any kind. In other respects they are entirely different and already here we mark the beginning of the two styles, Indo-Aryan and Dravidian, whose differences become more and more pronounced from the 7th century onwards. In the Indo-Aryan style, the most prominent ones tend to the perpendicular, and in the

Dravidian to the horizontal. The salient feature of the former again is the curvilinear steeple, and of the latter, the pyramidal tower. The most notable examples of the first kind are to be found among the temples of Bhubaneswar in Orissa, Khajarah in Bundelkhand, Osia in Jodhpur, and Dilwara on Mount Abu. One of the best known groups in the Dravidian style is that of the Mamallapuram Rathas, of 'Seven Pagodas', on the seashore to the south of Madras. They are each hewn out of a block of granite, and are rather models of temples than *raths*. They are the earliest examples of typical Dravidian architecture, and belong to the 7th century. To the same age has to be assigned the temple of Kailasanath at Conjeevaram, and to the following century some of the temples at Aihole and Pattadakal of the Bijapur District, Bombay Presidency, and the monolithic temple of Kailasa at Ellora, referred to above. Of the later Dravidian style the great temple at Tanjore and the Srirangam temple of Trichinopoly are the best examples.

Intermediate between these two main styles comes the architecture of the Deccan, called Chalukyan by Fergusson. In this style the plan becomes polygonal and star-shaped instead of quadrangular; and the high-storied spire is converted into a low pyramid in which the horizontal treatment of the Dravidian is combined with the perpendicular of the Indo-Aryan. Some fine examples of this type exist, at Dambal, Ratihali, Tiliwalli and Hangal in Dharwar, Bombay Presidency, and at Ittagi and Warangal in Nizam's Dominions. But it is in Mysore among the temples at Hallebid, Belur, and Somnathpur that the style is found in its full perfection.

Inscriptions.—We now come to inscriptions, of which numbers have been brought to light in India. They have been engraved on varieties of materials, but principally on stone and copper. The earliest of these are found incised in two distinct kinds of alphabet, known as Brahmi and Kharoshthi. The Brahmi was read from left to right, and from it have been evolved all the modern vernacular scripts of India. The Kharoshthi was written from right to left, and was a modified form of an ancient Aramaic alphabet introduced into the Punjab during the period of the Persian domination in the 6th century, B.C. It was prevalent up to the 4th century, A.D., and was supplanted by the Brahmi. The earliest dateable inscriptions are the celebrated edicts of Asoka. One group of these has been engraved on rocks, and another on pillars. They have been found from Shahbazgarhi 40 miles north-east of Peshawar to Nigliva in the Nepal Tarai, from Girnar in Kathiawar to Dhauli in Orissa, from Kalsi in the Lower Himalayas to Siddapur in Mysore, showing by the way the vast extent of territory held by him. The reference in his Rock Edicts to the five contemporary Greek Princes, Antiochus II. of Syria, Ptolemy Philadelphus, and so forth is exceedingly interesting, and fixes B.C. 269 as the date of his coronation. His Rummindei pillar inscription, again, discovered in Nepal Tarai, now settles, beyond all doubt, the birth-place of Buddha which was for long disputed. Another noteworthy record is the inscription of the Besnagar pillar. The pillar had been known for a long time, but Sir John

Marshall was the first to notice the inscription on it. It records the erection of this column, which was a Garuda pillar, in honour of the god Vasudeva by one Heliodoros, son of Dion, who is described as an envoy of King Antialcidas of Taxila. Heliodoros is herein called a *Bhagavata*, which shows that though a Greek he had become a Hindu and presumably a Vaishnava. Another inscription worth noticing and especially in this connection is that of Cave No. 10 at Nasik. The donor of this cave, Ushavadata, who calls himself a Saka and was thus an Indo-Scythian, is therein spoken of as having granted three hundred thousand kine and sixteen villages to gods and Brahmans and as having annually fed one hundred thousand Brahmans. Here is another instance of a foreigner having embraced Hinduism. Thus for the political, social, economical and religious history of India at the different periods the inscriptions are invaluable records, and are the only light but for which we are 'forlorn and blind.'

Saracenic Architecture.—This begins in India with the 13th century after the permanent occupation of the Muhammadans. Their first mosques were constructed of the materials of Hindu and Jaina temples, and sometimes with comparatively slight alterations. The mosque called *Adhai-din-ka-jhomptra* at Ajmer and that near the Qutb Minar are instances of this kind. The Muhammadan architecture of India varied at different periods and under the various dynasties, imperial and local. The early Pathan architecture of Delhi was massive and at the same time was characterised by elaborate richness of ornamentation. The Qutb Minar and tombs of Altamsh and Ala-ud-din Khilji are typical examples. Of the Sharqi style we have three mosques in Jaunpur with several tombs. At Mandu in the Dhar State, a third form of Saracenic architecture sprung up, and we have here the Jami Masjid, Hoshang's tomb, Jahaz Mahall and Hindola Mahall as the most notable instances of the secular and ecclesiastical styles of the Malwa Pathans. The Muhammadans of Bengal again developed their own style, and Pandua, Malda, and Gaur teem with the ruins of the buildings of this type, the important of which are the Adina Masjid of Sikandar Shah, the Elakhi mosque, Kadam Rasul Masjid, and so forth. The Bahmani dynasty of Gulbarga and Bidar were also great builders, and adorned their capitals with important buildings. The most striking of these is the great mosque of Gulbarga, which differs from all mosques in India in having the whole central area covered over so that what in others would be an open court is here roofed by sixty-three small domes. "Of the various forms which the Saracenic architecture assumed," says Fergusson, "that of Ahmedabad may probably be considered to be the most elegant." It is notable for its carved stone work; and the work of the perforated stone windows in Sidi Sayyid's mosque, the carved niches of the minars of many other mosques, the sculptured *Mithrabs* and domed and panelled roofs is so exquisite that it will rival anything of the sort executed elsewhere at any period. No other style is so essentially Hindu. In complete contrast with this was the form of architecture employed by the Adil Shahi dynasty of Bijapur.

There is here relatively little trace of Hindu forms or details. The principal buildings now left at Bijapur are the Jami Masjid, Gagan Mahall, Mihtar Mahall, Ibrahim Rauza and mosque and the Gol Gumbaz. Like their predecessors, the Pathans of Delhi, the Moghuls were a great building race. Their style first began to evolve itself during the reign of Akbar in a combination of Hindu and Muhammadan features. Noteworthy among the emperor's buildings are the tomb of Humayun, and the palaces at Fatehpur, Sikri and Agra. Of Jehangir's time his mosque at Lahore and the tomb of Itimad-ud-daula are the most typical structures. "The force and originality of the style gave way under Shah Jahan to a delicate elegance and refinement of detail." And it was during his reign that the most splendid of the Moghul tombs, the Taj Mahal at Agra, the tomb of his wife Mumtaz Mahall, was constructed. The Moti Masjid in Agra Fort is another surpassingly pure and elegant monument of his time.

Archæological Department.—As the archæological monuments of India must attract the attention of all intelligent visitors, they would naturally feel desirous to know something of the Archæological Department. The work of this Department is primarily two-fold, conservation, and research and exploration. None but spasmodic efforts appear to have been made by Government in these directions till 1870 when they established the Archæological Survey of India and entrusted it to General (afterwards Sir) Alexander Cunningham, who was also the first Director-General of Archæology. The next advance was the initiation of the local Surveys in Bombay and Madras three years after. The work of these Surveys, however, was restricted to antiquarian research and description of monuments, and the task of conserving old buildings was left to the fitful efforts of the local Governments, often without expert guidance or control. It was only in 1878 that the Government of India under Lord Lytton awoke to this deplorable condition, and sanctioned a sum of 3½ lakhs to the repair of monuments in United Provinces, and soon after appointed a conservator, Major Cole, who did useful work for three years. Then a reaction set in, and his post and that of the Director-General were abolished. The first systematic step towards recognising official responsibility in conservation matters was taken by Lord Curzon's Government, who established the seven Archæological Circles that now obtain, placed them on a permanent footing, and united them together under the control of a Director-General, provision being also made for subsidising local Governments out of imperial funds, when necessary. The Ancient Monuments Preservation Act was passed for the protection of historic monuments and relics especially in private possession and also for State control over the excavation of ancient sites and traffic in antiquities. Under the direction of Sir John Marshall, Kt., C.I.E., Director-General of Archæology, a comprehensive and systematic campaign of repair has been prosecuted, and the result of it is manifest in the present altered conditions of old buildings. One has only to see for example the Moghul buildings at Agra, Delhi, Lahore and Ajmer, in order to be convinced how the work of careful reconstruc-

tion and repair has converted these decayed and desecrated monuments with their modern excrescences into edifices of unrivalled loveliness. Another noteworthy feature of this work has been the rescue of many of these buildings from profane and sacrilegious uses. It is well-known that the superb Pearl Mosque of Jahangir in the Lahore Fort contained a Government treasury, and the Sleeping Hall of Shah Jahan served as a Church for the British troops. At Bijapur two mosques have been recovered, one of which was used as Dak Bungalow and the other as Post Office. The local Kutcherry has now been expelled from the lovely musjid of Sidi Sayyid at Ahmedabad. The Cave temples at Trichinopoly are no longer godowns. Nor has research work been in any way neglected under the new order of things. A unique feature of it for the first time introduced under the guidance and advice of Sir John Marshall has been the scientific excavation of buried sites, such as Sarnath where Buddha preached his first sermon, Kasia or Kusinara where he died, Saheth-Maheth the ancient Srasvati,

Taxila or Takshasila, the seat of the ancient Hindu University, Patna or Pataliputra, the Mauryan capital, Besnagar or the ancient Vidisa, and so forth. The results achieved, especially at the last three places, are of a sensational character. At Taxila Sir John has brought to light the remains of a palace of the Assyrian style and a massive and imposing temple dedicated to Zoroastrian worship and resembling a Greek peripteral temple with the addition of a solid tower of the Likkurat type rising behind the shrine. At Patna Dr. D. B. Spooner has found traces of a Mauryan palace which is an actual replica of the Achæmenian palace at Persepolis. At Besnagar Mr. D. R. Bhandarkar has excavated a temple of Vasudeva of the third century B.C., which proves to be the oldest of all Hindu shrines in India. Among other results of this excavation is the noteworthy discovery that the art of forging steel was practised in India more than two thousand years ago and that mortar was used in the construction of brick masonry at least as early as the third century B.C.

TIDAL CONSTANTS.

The approximate standard time of High Water may be found by adding to, or subtracting from, the time of High Water at London Bridge, given in the calendar, the corrections given as below:—

	H, M.		H, M.
Gibraltar	sub. 0 32	Rangoon River Entrance ..	add 1 35
Malta	add 1 34	Penang	sub. 1 39
Karachi	sub. 2 33	Singapore .. .. .	.. 3 25
Bombay .. .. .	.. 1 44	Hongkong .. .. .	.. 4 27
Goa .. .. .	.. 2 44	Shanghai .. .. .	.. 0 34
Point de Galle	add 0 12	Yokohama .. .. .	.. add 3 6
Madras	sub. 5 6	Valparaiso .. .. .	.. sub. 4 40
Calcutta	sub. 0 19	Buenos Ayres .. .. .	.. add 4 9
Rangoon Town	add 2 41	Monte Video .. .. .	.. 0 32

Manners and Customs.

Next to the complexion of the people, which varies from fair to black, the tourist's attention in India is drawn by their dress and personal decoration. In its simplest form a Hindu's dress consists of a piece of cloth round the loins. Many an ascetic, who regards dress as a luxury, wears nothing more, and he would dispense with even so much if the police allowed him to. The Mahomedan always covers his legs, generally with trousers, sometimes with a piece of cloth tied round the waist and reaching to the ankles. Hill men and women, who at one time wore a few leaves before and behind and were totally innocent of clothing, do not appear to-day within the precincts of civilisation and will not meet the tourist's eye. Children, either absolutely nude or with a piece of metal hanging from the waist in front, may be seen in the streets in the most advanced cities, and in the homes of the rich. The child Krishna, with all the jewels on his person is nude in his pictures and images.

Dress.—The next stage in the evolution of the Hindu dress brings the loincloth nearly down to the feet. On the Malabar coast, as in Burma, the ends are left loose in front. In the greater part of India, they are tucked up behind—a fashion which is supposed to befit the warrior, or one end is gathered up in folds before and the other tucked up behind. The simplest dress for the trunk is a scarf thrown over the left shoulder, or round both the shoulders like a Roman toga. Under this garment is often worn a coat or a shirt. When an Indian appears in his full indigenous dress, he wears a long robe, reaching at least down to the calves: the sleeves may be wide, or long and sometimes puckered from the wrist to the elbow. Before Europeans introduced buttons, a coat was fastened by ribbons, and the fashion is not obsolete. The Mahomedan prefers to button his coat to the left, the Hindu to the right. A shawl is tied round the waist over the long coat, and serves as a belt, in which one may carry money or a weapon, if allowed. The greatest variety is shown in the head-dress. More than seventy shapes of caps, hats, and turbans, may be seen in the city of Bombay. In the Punjab and the United Provinces, in Bengal, in Burma and in Madras other varieties prevail. Cones and cylinders, domes and truncated pyramids, high and low, with sides at different angles: folded brims, projecting brims: long strips of cloth wound round the head or the cap in all possible ways, ingenuity culminating perhaps in the "parrot's beak" of the Maratha turban—all these fashions have been evolved by different communities and in different places, so that a trained eye can tell from the head-covering whether the wearer is a Hindu, Mahomedan or Parsi, and whether he hails from Poona or Dharwar, Ahmedabad or Bhavnagar.

Fashion Variations.—Fashions often vary with climate and occupation. The Bombay fisherman may wear a short coat and a cap, and may carry a watch in his pocket; yet, as he must work for long hours in water; he would not cover his legs, but suspend only a coloured kerchief from his waist in front. The Pathan of the cold north-west affects loose baggy

trousers, a tall head-dress befitting his stature and covers his ears with its folds as if to keep off cold. The poorer people in Bengal and Madras do not cover their heads, except when they work in the sun or must appear respectable. Many well-to-do Indians wear European dress at the present day, or a compromise between the Indian and European costumes, notably the Indian Christians and Parsis. Most Parsis however have retained their own head-dress, and many have not borrowed the European collar and cuffs. The majority of the people do not use shoes: those who can afford them wear sandals, slippers and shoes, and a few cover their feet with stockings and boots after the European fashion in public.

Women's Costumes.—The usual dress of a woman consists of a long piece of cloth tied round the waist, with folds in front, and one end brought over the shoulder or the head. The folds are sometimes drawn in and tucked up behind. In the greater part of India women wear a bodice: on the Malabar coast many do not, but merely throw a piece of cloth over the breast. In some communities petticoats, or drawers, or both are worn. Many Mussalman ladies wear gowns and scarfs over them. The vast majority of Mahomedan women are *gosha*, and their dress and persons are hidden by a veil when they appear in public: a few converts from Hinduism have not borrowed the custom. In Northern India Hindu women have generally adopted the Mussalman practice of seclusion. In the Dekhan and in Southern India they have not.

As a rule the hair is daily oiled, combed, parted in the middle of the head, plaited and rolled into a chignon, by most women. Among high caste Hindu widows sometimes shave their heads in imitation of certain ascetics, or monks and nuns. Hindu men do not, as a rule, completely shave their heads, Mahomedans in most cases do. The former generally remove the hair from a part of the head in front, over the temples, and near the neck, and grow it in the centre, the quantity grown depending upon the fancy of the individual. Nowadays many keep the hair cropped in the European fashion, which is also followed by Parsis and Indian Christians. Most Mussalmans grow beards, most Hindus do not, except in Bengal and elsewhere, where the Mahomedan influence was paramount in the past. Parsis and Christians follow their individual inclinations. Hindu ascetics, known as Sadhus or Bairagis as distinguished from Sanyasis, do not clip their hair, and generally coil the uncombed hair of the head into a crest, in imitation of the god Shiva.

Hindu women wear more ornaments than others of the corresponding grade in society. Ornaments bedeck the head, the ears, the nose the neck, the arms, wrists, fingers, the waist—until motherhood is attained, and by some even later—and the toes. Children wear anklets. Each community affects its peculiar ornaments, though imitation is not uncommon. Serpents with several heads, and flowers, like the lotus, the rose, and the champaka, are among the most popular object or representation in gold or silver.

Caste Marks.—Caste marks constitute a mode of personal decoration peculiar to Hindus, especially of the higher castes. The simplest mark is a round spot on the forehead. It represents prosperity or joy, and is omitted in mourning and on fast-days. It may be red, or yellowish as when it is made with ground sandalwood paste. The worshippers of Vishnu draw a vertical line across the spot, and as Lakshmi is the goddess of prosperity, it is said to represent her. A more elaborate mark on the forehead has the shape of U or V, generally with the central line, sometimes without it, and represents Vishnu's foot. The worshippers of Shiva adopt horizontal lines, made with sandalwood paste or ashes. Some Vaishnavas stamp their temples, near the corners of the eyes, with figures of Vishnu's conch and disc. Other parts of the body are also similarly marked. The material used is a kind of yellowish clay. To smear the arms and the chest with sandalwood paste is a favourite kind of toilet, especially in the hot season. Beads of Tulsi or sacred Basil, and berries of *Rudraksha elaeocarpus ganitrus*, strung together are worn round their necks by Vaishnavas and Shaivas, respectively. The Lingayats, a Shaiva sect, suspend from their necks a metallic casket containing the Linga or phallus of their god. Bairagis, ascetics, besides wearing Rudraksha rosaries round their necks and matted hair, smear their bodies with ashes. Religious mendicants suspend from their necks figures of the gods in whose name they beg. Strings of cowries may also be seen round their necks. Muslim dervishes sometimes carry peacock's feathers.

Hindu women mark their foreheads with a red spot or horizontal line. High caste widows are forbidden to exhibit this sign of happiness, as also to deck themselves with flowers or ornaments. Flowers are worn in the chignon. Hindu women smear their faces, arms, and feet sometimes with a paste of turmeric, so that they may shine like gold. The choice of the same colour for different purposes cannot always be explained in the same way. The red liquid with which the evil eye is averted may be a substitute for the blood of the animal slaughtered for the purpose in former times. In many other cases this colour has no such associations. The Muslim dervish affects green, the Sikhi Akali is fond of blue, the Sanyasi adopts orange for his robe, and no reason can be assigned with any degree of certainty.

Shiva.—India is a land of temples, mosques and shrines, and the Hindu finds at every turn some supernatural power to be appeased. Shiva has the largest number of worshippers. He has three eyes, one in his forehead, a moon's crescent in his matted hair, and at the top of the coil a woman's face representing the river Ganges. His abode is the Mount Kailas in the Himalayas, from which the river takes its source. Round his neck and about his ears and limbs are serpents, and he also wears a necklace of skulls. In his hands are several weapons, especially a trident, a bow, and a thunderbolt, and also a drum which he sounds while dancing for he is very fond of this exercise. He sits on a tiger's skin, and his vehicle is a white bull. His wife Parvati and his son Ganesha sit on his thighs. An esoteric mean-

ing is attached to every part of his physical personality. The three eyes denote an insight into the past, present and future: the moon, the serpents, and the skulls denote months, years and cycles, for Shiva is a personification of time, the great destroyer. He is also worshipped as a Linga or phallus which represents creative energy.

Ganpat.—Ganesh or Ganpati, the controller of all powers of evil subject to Shiva, is worshipped by all sects throughout India. Every undertaking is begun with a prayer to him. He has the head of an elephant, a large abdomen, serpents about his waist and wrists, several weapons in his hands, and a piece of his tusk in one hand. He is said to have broken it off when he wanted to attack the moon for ridiculing him. The different parts of his body are also esoterically explained. His vehicle is a rat.

Parvati.—Parvati, the female energy of Shiva, is worshipped under various names and forms. She is at the head of all female supernatural powers, many of whom are her own manifestations. Some are benign and beautiful, others terrible and ugly. Kali, the tutelary deity of Calcutta or Calcutta, is one of her fierce manifestations. In this form she is black: a tongue smeared with blood projects from her gaping mouth: besides her weapons, she carries corpses in her hands, and round her neck are skulls. Bombay also takes its name from a goddess, Mumbadevi. Gouri, to whom offerings are made in Indian homes at an annual festival, is benign. On the other hand the epidemic diseases like the plague and small-pox are caused by certain goddesses or "mothers."

Vishnu, the second member of the Hindu trinity, is the most popular deity next to Shiva. He is worshipped through his several incarnations as well as his original personality. His home is the ocean of milk, where he reclines on the coils of a huge, many-headed serpent. At his feet sits Lakshmi, shampooing his legs. From his navel issues a lotus, on which is seated Brahma, the third member of the trinity. In his hands are the conch, which he blows on the battlefield, and the disc, with which the heads of his enemies are severed. Round his neck are garlands of leaves and flowers, and on his breast are shining jewels. As Shiva represents destruction, Vishnu represents protection, and his son is the god of love. To carry on the work of protection, he incarnates himself from time to time, and more temples are dedicated nowadays to his most popular incarnations, Rama and Krishna, than to his original personality. Rama is a human figure, with a bow in one of his hands. He is always accompanied by his wife Sita, often by his brother Lakshmana, and at his feet, or standing before him with joined hands, is Hanuman, the monkey chieftain, who assisted him in his expedition against Ravana, the abductor of his wife. Krishna is also a human figure, generally represented as playing on a flute, with which he charmed the damsels of his city, esoterically explained to mean his devotees.

Brahma is seldom worshipped: only a couple of temples dedicated to him have yet been discovered in all India,

Minor Deities.—The minor gods and goddesses and the deified heroes and heroines who fill the Hindu pantheon, and to whom shrines are erected and worship is offered, constitute a legion. Many of them enjoy a local reputation, are unknown to sacred literature, and are worshipped chiefly by the lower classes. Some of them, though not mentioned in ancient literature, are celebrated in the works of modern saints.

The **Jains** in their temples, adore the sacred personages who founded and developed their sect, and venerate some of the deities common to Hinduism. But their view of Divinity is different from the Hindu conception, and in the opinion of Hindu theologians they are atheists. So also the **Buddhists** of Burma pay almost the same veneration to Prince Siddhartha as if he was a god, and indeed elevate him above the Hindu gods, but from the Hindu standpoint they are also atheists.

Images.—Besides invisible powers and deified persons, the Hindus venerate certain animals, trees and inanimate objects. This veneration must have originated in gratitude, fear, wonder, and belief in spirits as the cause of all good or harm. Some of the animals are vehicles of certain gods and goddesses—the eagle of Vishnu: the swan of Brahma: the peacock of Saraswati: Hanuman, the monkey, of Rama: one serpent upholds the earth, another makes Vishnu's bed: elephants support the ends of the universe, besides one such animal being Indra's vehicle: the goddess Durga or Kali rides on a tiger: one of Vishnu's incarnations was partly man and partly lion. The cow is a useful animal: to the Brahman vegetarian her milk is indispensable, and he treats her as his mother. So did the Rishi of old, who often subsisted on milk and fruits and roots. To the agriculturist cattle are indispensable. The snake excites fear. Stones, on which the image of a serpent is carved, may be

seen under many trees by the roadside. The principal trees and plants worshipped are the Sacred Fig or Pipal, the Banyan, the Sacred Basil, the Bilva or Wood Apple, the Asoka, and the Acacia. They are in one way or another associated with some deity. The sun, the moon, and certain planets are among the heavenly bodies venerated. The ocean and certain great rivers are held sacred. Certain mountains, perhaps because they are the abodes of gods and Rishis, are holy. Pebbles from the Gandaki and the Narmada, which have curious lines upon them, are worshipped in many households and temples.

Worship.—Without going into a temple, one can get a fair idea of image worship by seeing how a serpent-stone is treated under a tree. It is washed, smeared with sandal, decorated with flowers: food in a vessel is placed before it, lamps are waved, and the worshipper goes round it, and bows down his head, or prostrates himself before the image. In a temple larger bells are used than the small ones that are brought to such a place: jewels are placed on the idol: and the offerings are on a larger scale. Idols are carried in public procession in palanquins or cars. The lower classes sacrifice animals before their gods and goddesses.

Domestic Life.—Of the daily domestic life of the people a tourist cannot see much. He may see a marriage or funeral procession. In the former he may notice how a bridegroom or bride is decorated: the latter may shock him, for a Hindu dead body is generally carried on a few pieces of bamboo lashed together: a thin cloth is thrown over it and the body is tied to the frame. The Mahomedan bier is more decent, and resembles the Christian coffin. Some Hindus, however, carry the dead to the burial ground in a palanquin with great pomp. The higher castes cremate the dead: others bury them. Burial is also the custom of the Muslims, and the Parsis expose the dead in Towers of Silence.

Indian Names.

The personal name of most Hindus denotes a material object, colour, or quality, an animal, a relationship, or a deity. The uneducated man, who cannot correctly pronounce long Sanskrit words, is content to call his child, father, brother, uncle, or mother, or sister, as the case may be. This practice survives among the higher classes as well. Appa Saheb, Anna Rao, Babaji, Bapu Lal, Bhai Shankar, Tatacharya, Jijibhai, are names of this description, with honorific titles added. It is possible that in early society the belief in the re-birth of departed kinsmen lent popularity to this practice. Nothing could be more natural than to call a man white, black, or red: gold or silver: gem, diamond, ruby, pearl, or merely a stone: small or tall, weak or strong: a lion, a snake, a parrot, or a dog: and to name a woman after a flower or a creeper. Thus, to take a few names from the epics, Pandu means

white, and so does Arjuna: Krishna black Bhima terrible: Nakula a mongoose: Shunaka a dog: Shuka a parrot: Shringa a horn. Among the names prevalent at the present day Hira is a diamond: Ratna or Ratan a jewel: Sonu or Chinna gold: Velli or Belli, in the Dravidian languages, means white metal or silver. Men are often called after the days of the week on which they were born, and hence they bear the names of the seven heavenly bodies concerned. When they begin to assume the names of the Hindu deities, they practically enter upon a new stage of civilisation. It is doubtful whether the Animists ever venture to assume the names of the dreaded spirits worshipped by them. To pronounce the name of a devil is to invite him to do harm. If the spirits sometimes bear the names of human beings, the reason seems to be that they were originally human.

High-caste practices.—The high caste Hindu, on the other hand, believes that the more often the name of a deity is on his lips, the more merit he earns. Therefore he deliberately names his children after his gods and goddesses, so that he may have the opportunity of pronouncing the holy names as frequently as possible. These are also sonorous and picturesque. Shiva is happy: Vishnu is a pervader: Govinda is the cowherd Krishna: Keshava has fine hair: Rama is a delighter: Lakshmana is lucky: Narayana produced the first living being on the primeval waters: Ganesha is the Lord of Shiva's hosts: Dinakara is the luminary that makes the day: Subrahmanya is a brother of Ganesha. Sita is a furrow: Saitri a ray of light: Tara a star: Radha prosperity: Rukmini is she of golden ornaments: Bhama of the glowing heart. Shiva and Vishnu has each got at least a thousand names, and they may be freely drawn upon and paraphrased in naming one's children; and the whole Hindu pantheon is as crowded as it is large. When a mother loses several children, she begins to suspect that some evil spirit has conspired against her and in order to make her off-spring unattractive to the powers of darkness, she gives them ugly names, such as Keru, rubbish, or Ukirda, dunghill, or Martoba, the mortal. Women are named after rivers, as Sarasvati, Ganga, Bhagirathi, Godavari, or Kaveri, just as men are sometimes called after mountains. Manu counsels young men not to choose a wife with such a name, perhaps because a river is an emblem of deviousness and inconstancy, as a hill is an emblem of stability. But the names of rivers have not been discarded. The Burmans have a curious custom: if a child is born on a Monday, its name must begin with a guttural, on Tuesday with a palatal, on Thursday with a labial, on Saturday with a dental.

Family names.—When a person rises in importance, he adds to his personal name a family or caste name. It was once the rule that the title Sharma might be added to a Brahman's name, Varma to a Kshatriya's, Gupta to a Vaishyas, and Dasa to a Shudra's. This rule is fairly well observed in the case of the first two titles, but the meaning of the other two has changed. Dasa means a slave or servant, and the proudest Brahman cannot disdain to call himself the servant of some god. Thus, although Kalidas, the famous poet, was a Shudra, Ramadas, the famous guru of Shriji, was a Brahmin. The Vaishnavas have made this fashion of calling oneself a servant of some god exceedingly popular, and in Western India high caste Hindus of this sect very commonly add Das to their names. The Brahmans of Southern India add Aiyer or Aiyangar to their names. Shastri, Acharya, Bhat, Bhattacharya, Upadhyaya, Mukhopadhyaya, changed in Bengal into Mukerji, are among the titles indicative of the Brahmanical profession of studying and teaching the sacred books. Among warlike classes, like the Rajputs and Sikhs, the title Singh (lion) has become more popular than the ancient Varma. The Sindhi Mal, as in Gidumal, means brave and has the same force. Raja, changed into Raya, Rao and Rai was a political title, and is not confined to any caste. The Bengali family names, like Bose and Ghose,

Dutt and Mitra, Sen and Guha, enable one to identify the caste of their bearers, because the caste of a family or clan cannot be changed. Shet, chief of a guild or a town, becomes Chetty, a Vaishya title, in Southern India. Mudaliyar and Nayudu, meaning leaders, are titles which were assumed by castes of political importance under native rulers. Nayar and Menon are the titles of important castes in Malabar. Ram, Lal, Nand, Chand, are among the additions made to personal names in Northern India. Suffixes like Ji, as in Ramji or Jamshedji, the Kanarese Appa, the Telugu Garu, the feminine Bai or Devi, are honorific. Prefixes like Babu, Baba, Lala, Sodhi, Pandit, Raja, and the Burmese Maung are also honorific.

Professional names.—Family names sometimes denote a profession: in some cases they might have been conferred by the old rulers. Mehta, Kulkarni, Deshpande, Chitnavis, Mahalnavis are the names of offices held in former times. One family name may mean a flour seller, another a cane-seller, and a third a liquor-seller. To insert the father's name between one's personal and the family name is a common practice in Western India. It is rare elsewhere. When a family comes from a certain place, the suffix 'kar' or 'wallah' is added to the name of the place and it makes a family surname in Western India. Thus we may have Chiplunkars and Suratwallahs, or without these affixes we may have Bhavnagris, Malabaris and Bilimorias, as among Parsis. Thus Vasudev Pandurang Chiplunkar would be a Hindu, whose personal name is Vasudev's father's name Pandurang, and family name derived from the village of Chiplun, is Chiplunkar. In Southern India the village name precedes the personal name. The evolution of Musalman names follows the same lines as Hindu names. But Muslims have no god or goddesses, and their names are derived from their religious and secular history. These names and titles are often as long and picturesque as Hindu appellations. The agnomens Baksh, Din, Ghulam, Khwaje, Fakir, Kazi, Munshi, Sheikh, Syed, Begum, Bibi and others, as well as honorific additions like Khan, have meanings which throw light of Muslim customs and institutions. The Parsis also have no gods and goddesses, and their personal names are generally borrowed from their sacred and secular history. Their surnames frequently indicate a profession or a place, as in the case of Hindus in Western India. Batliwallah, Readymoney, Contractor, Saklatwallah, Adenwallah and others like them are tell-tale names.

Conversions.—As a rule, a child is named soon after it is born, and in the case of males the appellation is not changed. The higher Hindu castes have a separate ceremony called the name-giving ceremony performed on the twelfth day after birth. When a girl is married in these castes, the husband's family give her a new personal name. When a boy is invested with the sacred thread and is made a twice-born, his name is not changed, but when a man joins an order of ascetics, his lay name is dropped, and he assumes a new name. So also when a Burman joins an order of monks or nuns, the lay name is superseded by a Pali name. Christian converts change their original name when they are baptised.

Indian Art.

In India there has never been so marked a separation between what are now known as the Fine Arts, and those applied to industry as was the case in Europe during the nineteenth century. As, however, Industrial art forms the subject of a special article in this book, the term Indian Art will here be confined to Architecture, Sculpture and Painting.

Historical.—The degree of proficiency attained in art by Indians prior to B. C. 250, can only be conjectured by their advancement in literature; and by the indirect evidences of indebtedness shown by the works of the historic period, to those which preceded them; for direct records of artistic work of an earlier date than B. C. 250 do not exist. The chief historic schools of architecture are as follows:

Name.	Dates.	Locality of the best Examples.
Buddhist	..B.C.250— A.D.750.	Ellora, Ajanta, Kali, Sanchi.
Jaina ..	..A.D.1000— 1300.	Ellora, Mount Abu, Palitana.
Brahminical.	A.D. 500 to the present day.	Ellora, Elephanta, Orissa, Bhuvanewar, Dharwar.
Chalukyan	..A.D.1000— 1200.	Umber, Somnathpur Ballur.
Dravidian	..A.D.1350— 1750.	Ellora, Tanjore, Madura, Thnevelly.
Pathan	..A.D.1200— 1550.	Delhi, Mandu, Jaunpore.
Indo-Saracenic	A.D.1520— 1760.	Lahore, Delhi, Agra, Amber, Bijapur.

Buddhist Architecture is mainly exemplified by the rock-cut temples and monasteries found in Western India and in the *Topes* or sacred mounds. The interior decorations, and external facades of the former, and the rails and gates surrounding the latter point unmistakably to their being derived from wooden structures of an earlier period. The characteristic features of these temples are horse-shoe openings in the facades to admit light, and colonnades of pillars with richly ornamented caps in the interior halls. Jaina Architecture is found in its most highly developed form in the Dilwara temples at Mount Abu. The ground plan consists of a shrine for the god or saint; a porch, and an arcaded courtyard with niches for images. The characteristic of the style is grace and lightness, with decorative carving covering the whole interior, executed with great elaboration and detail. Constructional methods suggest that original types in wood have been copied in marble.

Brahminical, Chalukyan and Dravidian styles differ little in essential plan, all having a shrine for the god, preceded by pillared porches. The outer forms vary. The northern Brahminical temples have a curved pyramidal roof to the shrines, which in the southern or Dravidian style are crowned by a horizontal system of storied towers, and each story, decreasing in size, is ornamental with a central cell and figures in high relief. The Chalukyan style is affected by its northern and southern neighbours, taking features from each without

losing its own special characteristics of which the star-shaped plan of the shrine, with the five-fold bands of external ornament, is the principal features. Pathan Architecture was introduced into India by the Mahomedan invasion of the thirteenth century. At old Delhi are fine examples in the Kutub Mosque and Minar. The characteristics of the style are severity of outline, which is sometimes combined with elaborate decoration due, it is stated, to the employment of Hindu craftsmen. The mosques and tombs at Ahmedabad already show Hindu influence; but purer examples are to be found at Jaunpore and Mandu. Indo-Saracenic Architecture reached the climax of its development during the reigns of the Moghul Emperors, Akbar, Jehangir and Shah Jahan. It eclipsed in richness of material and refinement of taste the building efforts of previous periods, its crowning example being the Taj Mahal at Agra. The buildings erected during the Adil Shahi dynasty at Bijapur at a slightly later date, exhibit a certain Turkish influence; especially in the great tomb of Mahmood. Though less refined and lacking the attraction of precious materials in their decoration, these splendid edifices are held in higher esteem by some critics than those of the Moghals, on account of their simplicity, grandeur and fine proportions. The era of great civil architecture in India was revived by the Mahomedan powers. Splendid palaces and fortresses were built at Madras, Delhi, Agra, Fattchpore-Sikri and Bijapur, and the example thus set was copied by the Hindu princes at Jaipur, Udaipur and elsewhere in India. The application of great architectural treatment, unequalled in extent elsewhere, is to be seen in the Ghauts or steps enclosing lakes and on the banks of rivers. The most notable constructional contribution of the Mahomedans to Indian architecture was the introduction of the true arch and dome.

Sculpture.—The use of sculpture and painting in isolated works of art was practically non-existent in India until modern times. One or two reliefs and certain gigantic figures may be quoted as exceptions, but taken generally it may be stated that these arts were employed as the decorative adjuncts of architecture. No civil statuary, such as is now understood by the term, was executed; for no contemporary portrait figures, or busts in marble, or bronze, have come down to us from the ruins of ancient India, as they have from those of Egypt, Greece and Rome. Sculpture has been used exclusively as the handmaid of religion, and to this fact may be attributed the stereotyped forms to which it became bound. The lavish use of sculpture on Indian temples often exceeds good taste, and mars the symmetry and dignity of their mass and outline; but for exuberance of imagination, industrious elaboration and vivid expression of movement, Indian sculpture is perhaps without its equal elsewhere in the world. The most impressive specimens are the earliest, found in the Buddhist and Brahminical cave temples of Ellora, Ajanta and Elephanta. The great Trimurthi in the last named of these temples ranks for mystery

and expressive grandeur with the greatest masterpieces of Egyptian art. The outstanding characteristics of Hindu sculpture are the power displayed in suggesting movement; the fine sense of decorative arrangements of line and mass; and an overpowering ingenuity in intricate design. Mahomedan sculpture in India, though not exclusively confined to geometric forms as is that of the more severe Arabian school, is very restrained as compared with that of the Hindus. Floral motifs are often used in the ornaments to tombs and palaces, but rarely in those of mosques. Their geometric ornament shows great ingenuity and invention; and wonderful decorative use is made of Persian, Arabic and Urdu lettering in panels, and their borders. The representation of human or animal figures is rarely to be met with. Sculptured and modelled relief is, as a rule, kept very low; and is mainly confined to the decoration of mouldings, architraves, lintels, or the bands of ornament which relieve large exterior wall spaces. Buildings of purely Mahomedan design and workmanship show greater restraint than those upon which Hindu workmen have been employed and are more satisfactory; but at Ahmedabad the two celebrated windows are striking examples of a happy combination of the two styles.

Painting.—Much of the carved stonework upon ancient Indian buildings was first plastered and then decorated with colour, but the only paintings, in the modern acceptance of the term, now existing, which were executed prior to the Moghul period, are those upon the walls of the cave temples at Ajanta. These remarkable works were produced at intervals during the first 600 years of the Christian era. They exhibit all the finer characteristics of the best Indian sculpture, but with an added freedom of expression due to the more tractable vehicle employed. They remained hidden in the Deccan jungles for nearly twelve hundred years, until accidentally discovered in 1816. They are painted in a species of fresco; and when first brought to light were well preserved, but they have greatly deteriorated owing to the well meant, but misguided action of copyists, and the neglect of the authorities. Their origin is as wrapt in mystery as is that of the artists who painted them; for no other paintings of similar power and character are known to exist; and the artists, so far as is known, left no successors. Nine hundred years elapsed between the completion of the Ajanta paintings and the commencement of the second period of Indian painting. This owned its origin to the introduction of Persian artists by the Moghul Emperor Akbar; and the establishment of the indigenous Moghul school was due to the encouragement and fostering care of his successors, Jehangir and Shah Jahan. Unlike the works of the Ajanta painters, which were designed upon a large scale, the pictures of the Moghul school were miniatures. They were executed in a species of opaque water-colour upon paper or vellum, resembling in technique the illuminated missals produced by the monks in Europe during the middle ages. Some of the finest of the earlier specimens in India are of a religious character; this phase of development being closely allied to the art

the calligraphist. As its range extended, a remarkable school of portrait painters arose; notable for restrained but extremely accurate drawing, keen insight into character, harmonious colour, fine decorative feeling, and extraordinary delicacy and finish in the painting of detail. The artists of a Hindu off-shoot of this movement, known as the Rajput school, were less fully endowed with the technical and purely aesthetic qualities than were the Moghul painters; but they brought to their work poetry and sentiment which are not to be found in that of the Mahomedans. The pictures of both branches of the Moghul school, although highly decorative in character, were not intended for exhibition upon the walls of rooms, according to Western practice, and, when not used as illustrations or decorations to manuscript books, were preserved in portfolios. As this school of painting was the last expression of traditional art in India, in the restricted sense here applied to the term, and, as the question has a distinct bearing upon the modern development of painting, a few words may be added regarding the difference between the conventions followed by Eastern and Western painters. Until the middle of the fourteenth century the conventions of both East and West were practically the same, though the use of them differed according to environment and national temperament. These conventions the artists of the East have retained; and development has been upon the line of decorative fitness, harmony of colour, and expressive action. Their art has throughout been decorative, and when natural objects have been depicted, their treatment has been that of a flat pattern. The European painters, after the period above mentioned on the contrary, sought to attain the appearance of actuality in the objects depicted by the study of the science of light and shade, and perspective; and in achieving this end, and developing it into the realisation of atmosphere and light, they sacrificed a large measure of the decorative quality which characterised the work of the earlier school. Eastern artists have ignored or been blind to light and shade; and in works entirely free from European influence one will look in vain for any suggestion of it in their figures or for shadows of objects cast upon the ground. During the last fifty years there has been a strong movement toward a return to decorative conventions, on the part of European artists who have assimilated much that the East has to teach them, without thereby affecting the distinctively Western character of their work. Indian and Japanese artists have been less successful when attempting the reverse of this practice, and appear to lose whatever is best in their traditional practice without acquiring the finer qualities of that of the West.

Modern Painting.—As the reign of Shah Jahan exhibits the high tide of artistic development in India, so the reign of his successor Aurangzeb marks the period of its rapid decline. The causes of this are attributable to the absence of encouragement by this Emperor; to his long periods of absence from the court at Delhi or Agra, entailed by the continuous wars he waged in his efforts to bring the whole of the Peninsula under his rule; and partly to the tendency strongly inherent in the Indian artist

to become stereotyped in his practice. All foreign designers, painters and craftsmen who had been attracted to India by the great works carried out by Akbar, Jehangir and Shah Jahan left the country, and their places were taken by no successors. The indigenous artists left to themselves in the isolated courts of small Indian princes, or collected in schools in remote districts, employed themselves mainly upon repeating the works of a previous age, instead of seeking new motifs for artistic treatment. So purely mechanical did the work become that in some of the schools or guilds of painters, the execution of a single picture was subdivided; one craftsman painting the face, a second the drapery, and a third the background. Such methods could only lead to deterioration and decay. At the time when the British East India Company ceased to be only a guild of merchants and became a great administrative power in 1757, very little vitality survived in the ancient art of the country. During the century of its administrative history between the battle of Plassey and the Indian Mutiny, the "Company" was too fully occupied in fighting for its existence, extending its borders and settling the internal economy of its ever increasing territories, to be able to give much attention to conserving any remnant of artistic practice which had survived. Without any deliberate intention of introducing western art into the country, Greek and its derivative styles of architecture were adopted for public and private buildings in Calcutta, Bombay and Madras because these were found to be more suitable for their purpose than buildings of indigenous pattern. The practical result was the same; for the Indian craftsmen employed upon their erection were confronted with styles affording no scope for the application of their traditional ornament and concerning which they had no knowledge or sympathy. As there were no sculptors in India capable of modelling or carving civil sculpture, the monuments to distinguish public servants were all imported from England; and the portraits, or other paintings which decorated the interior walls of the buildings, were furnished by European painters who visited India or by artists in England. Although a considerable amount of research work of a voluntary nature was done by Archaeologists, no official interest was taken in artistic education until the Government of India was transferred to the British Crown in 1859. In England itself, the first fifty years of the nineteenth century was a period of gross commercialism and artistic degradation; but with the advent of the International Exhibition of 1851 the eyes of the nation were opened to the value of art as applied to industry.

The Schools of Art then instituted throughout England were imitated in a timid and tentative manner in India; and were attached to the educational system, which had been previously modelled upon a definitely European basis. These schools of art, it should be remembered, were specially established to assist the artistic industries of the country, and not to provide instruction in architecture, sculpture and painting. In fact at a subsequent period they narrowly escaped extinction by the Secretary of State, upon the ground that they had become schools of painting and had thus

been diverted from performing the original function for which they were established. The work of the Schools of Art in regard to industrial art is referred to elsewhere; and as two of them, that at Madras and that at Lahore, have confined their activities almost exclusively to this branch of the subject it is necessary to mention only the work of the Schools at Calcutta and Bombay in the present article. The Calcutta school, except for occasional experiments in the application of the graphic arts to lithography, engraving and stained glass, has become a school of painting and drawing. That at Bombay covers a wider field; for in addition to classes for modelling, painting and design it possesses a special school of architecture; a range of technical workshops, in which instruction is given in the applied arts; and research laboratories and studios devoted solely to the improvement of the Pottery industry. It is in the principles underlying the instruction in painting that the schools at Calcutta and Bombay have taken almost diametrically opposite roads to reach the end they both have in view, namely, the revival of the art of painting in India by means of an indigenous school of Indian painters. Mr. Havell, who until a few years back was the Principal of the Calcutta School, banished from within its walls every vestige of European art; and claimed that the traditional art of India, in its old forms, is not dead, but merely sleeping or smothered by the blanket of European culture laid upon it for the last 150 years, and needed but to be released from this incubus to regain its pristine vigour. Well equipped with literary ability; backed by intense enthusiasm for the views he held, which he advocated with admirable persistence; he imposed upon his students an exclusive and severe study of the Moghul and Rajput schools of painting. He was fortunate in finding a willing and equally enthusiastic disciple in Mr. Abinandranath Tagore, an artist of fine imagination and fancy, endowed with technical ability of a high order, combined with a serious devotion to his art. He with other Bengal painters, inspired by Mr. Havell's precepts, founded, about fifteen years ago, what has since become known as the Calcutta School of painting. In their early work the painters of this school closely adhered to the conventions of Moghul and Rajput artists, whom they took as their models; and these early examples made a great impression upon all European critics who saw them. They were welcomed as the first sign of a genuine revival of Indian painting, based upon traditional lines, and it was confidently hoped that the movement would meet with the support it merited from Indians of all classes. Interesting as many individual works of the school undoubtedly are the anticipations which greeted its inception have scarcely been fulfilled by the Calcutta school. The painters themselves have never reached the high technical standard of the artists who produced the best works of the Moghul or Rajput school; and, as time has passed, their outlook appears to have shifted, and, while stemming the flood of western influence, they appear to have drifted into a backwater of Japanese conventions. The Indian public has failed to give the school the support it was hoped they would afford, and the movement has had to depend for encourage-

ment mainly upon Europeans in England and India.

Bombay School of Art.—The attitude towards the development of art in modern India taken by Mr. Cecil Burns, who has guided the policy of the Bombay school, is diametrically opposite to that favoured by Mr. Havell. While yielding to no one in his admiration for the ancient art of India, and giving every encouragement to his students to study its masterpieces, the view he takes is that with European literature dominating the system under which the educated classes in India are trained; with European ideas, and science permeating the professional, commercial, industrial, and political life of the country, it is not possible for modern Indians now to recapture the spirit which alone gave vitality to the great works of the past; that without this spirit, the conventions the ancient artists adopted are mere dead husks; and that to copy these would be as unprofitable as it would be for the artists of Europe to harness themselves to the conventions of the Greek and Roman sculptors or to those of the mediæval painters; that with European pictures, often of inferior quality illustrating every educational text book, and sold in the shops of every large city, it is essential for the proper education of art students that they should have before them the masterpieces of European art; and that, with the wide adoption of European styles of architecture in India, it is necessary for a school of art to possess the best examples of ornament applicable to the great historic styles, for the purpose of study and refer-

ence. There are certain basic principles common to the technique of all great art, such as fine and accurate drawing in its widest sense, composition and design, and the science of colour harmony. By means of these an artist can express his individuality and emotions, and Mr. Burns holds that the main function of a School of Art is to equip its students with the power of expression, untrammelled by any set conventions, so that when they leave the school, they do so with the capacity to employ their faculties in any direction their sympathies and tastes may impel them to take. Which of these two very divergent theories will produce the result both these gentlemen unite in wishing to see brought to pass, time alone will show. Certain it is that the driving force of any artistic impulse must come from within the nation, and that India, like every other country, in its art, as in other matters, must work out its own salvation.

One striking success of hopeful augury has been achieved by the Bombay School in recent years. This is the establishment of a flourishing school of architecture in which the study of Indian architecture takes an important place. Connected with this school is a students' architectural association designed to keep past students in touch with the school and with one another. As architecture embraces and influences every branch of decorative and industrial art, it is to be hoped that this school may be the means whereby the ancient glories of Indian architecture will be some day revived in new forms, bringing in its train a vitalising influence upon every other form of artistic activity.

Routes between India and Europe.

The War from its outset completely altered the sailing programmes of all steamship lines maintaining services between India and Europe and the taking over of all vessels by the Shipping Controller upset the programmes altogether.

The Indian port for the direct journey to and from Europe is Bombay. There are ordinarily six lines of steamers by which the journey to and from the West *via* Bombay can be performed, either by sea all the way, or—and in some cases only—by sea part of the way and by rail across Europe. They are the P. & O., the Anchor Line, the City and Hall Line, and the Lloyd Triestino. The British India line also has an occasional service to London. The Natal line steamers are available for Western passages only, the steamers sailing round the Cape on their Eastward voyages. There are

ordinarily other services between Calcutta and the West, by steamers sailing round Ceylon, and several lines connect Colombo with Europe. Of the latter the Orient, the Messageries Maritimes and the Bibby Lines are the chief, besides the P. & O. The Bibby service extends to Rangoon. The new railway between India and Ceylon greatly increases the importance of the Colombo route for Southern India. The shortest time between London and Bombay is 14 days.

Fares from India by any of these lines fluctuate with the Exchange. First class fares by Ellerman's City and Hall Lines to Liverpool are £ 52 single, and £ 78 return, and to Marseilles £ 49-10 and £ 74-10. The Lloyd Triestino fares to Venice or Trieste are £ 60 first class and £ 46 second class.

Indian Train Service.

The distances and railway fares from Bombay to the principal centres of other parts of India are as follows, the trains now running considerably more slowly (for economy's sake) than in normal times :—

-----	Miles.	1st Class.	2nd Class.
		Rs. a.	Rs. a.
Delhi, B. B. & C. I. Railway, <i>via</i> new Nagda-Muttra direct route	865 (27½ hours)	81 2	40 9
Delhi, G. I. P. Railway, <i>via</i> Agra	957	81 2	40 9
Simla, <i>via</i> Delhi	(30½ hours) 1,137	118 3	60 1
Calcutta, G.I.P. from Bombay, <i>via</i> Jubbulpore & Allahabad..	1,349	113 3½	56 10½
Calcutta, G. I. P. from Bombay, <i>via</i> Nagpur	1,223	105 3½	52 10½
Madras, G. I. P. from Bombay, <i>via</i> Raichur	794	74 8	37 3
Labore, <i>via</i> Delhi	1,162	109 0	54 8

THE SUEZ CANAL.

The annual report of the **Suez Canal Company** published in 1919 shows that the general maritime movement of 1918 was represented by the passing through the Canal of 2,225 ships of altogether 9,251,601 tonnage. In comparison with 1917 this is an increase of 169 ships and 882,683 tons (*i. e.*, 10-54 per cent.), but in comparison with the last report of normal years, that of 1913, there is a decrease of 2,563 ships and 10,782,283 tons, *viz.* 53.82 per cent. Nevertheless, if from the year 1913 the number of ships of enemy countries, as well as those of Russia, be omitted, the maritime movement in 1918 showed a decrease only of 40.13 instead of 45.84 per cent. in 1917.

The dues which the Canal Company was

authorised to charge by its concession of 1856 were 10 francs a ton, charged on the gross register tonnage. To these objections were soon raised and as the result of an international Conference at Constantinople in 1873 the dues were fixed at 10 francs per net register ton with a surtax of 4 francs—afterwards reduced to 3. British shipowners still found the dues excessive and a meeting of their representatives and those of the Canal Company in 1883 agreed that in 1885 the dues should be reduced to 9½ francs a ton, that subsequently they should be lowered on a sliding scale as the canal dividend increased, and that after the dividend reached 25 per cent. all the surplus profits

should be applied in reducing the rates until they were lowered to 5 francs a ton. Under this arrangement dues were fixed at 7½ francs per ton at the beginning of 1906, and at the outbreak of war were as low as 6½ francs a ton, where they remained until October, 1916, when they were raised by ½ franc a ton. An increase of 20c. per ton of 40 cubic feet in the dues of ships in ballast, took effect from 1st Jan. 1918, the effect of which was to bring the rates for laden and empty ships to the same level—8f. 50c. which as the dues are payable at the rate of 26f. 40c. to the £, is equivalent to 6s. 5d. The report issued in 1919 stated that altogether receipts for transit reached in 1918 a total of 83,404,235f. 57c., against 64,075,639f. 96c. in 1917. In this total the shares due to the various increases of tariff made since 1916 represents about 27,274,000f.

Improvement Schemes.—It was announced in 1914 that from and after January 1st, 1915, the maximum draught of water allowed to ships going through the Suez Canal would be increased by 1ft., making it 30ft. English.

The maximum permissible draught of ships using the Canal was 24·4 feet in 1870; in 1890 ships drawing 25·4 feet could make the passage; and during the following 24 years the increase has been at the average rate of about 1 foot every six years, thus bringing the maximum draught authorized to 29 feet.

The scheme of improvement adopted by the Company on the recommendation of the International Consultative Committee of Works, the British representatives on which are Sir William Matthews and Mr. Anthony Lister, is a comprehensive one, and the details suggest that it will meet the needs of the big ship.

A 40 feet Channel.—The declared policy of the Canal Company in regard to the deepening of the Canal is to offer a slightly greater depth of water than that available in ports east of Suez. It is claimed that, with the exception of Sydney, there is no eastern port which at

low tide has a greater depth of water than that now provided in the Canal throughout the full length of nearly 105 miles. In any case the work in hand should meet the needs of any ship likely to be built for the eastern trade during the next few years.

When the Canal was opened in 1869, the width was 72 feet and the depth about 26 feet 2 inches. In June, 1913, the width at a depth of 32 feet 8 inches had been increased to a minimum of 147 feet 6 inches over a length of about 85 miles, and to a width of 328 feet over a distance of about 20 miles. The latest scheme makes provision for a depth of 40 feet throughout and for a widening up to 196 feet 8 inches in the south section, and the cutting of an appropriate number of sidings in the north and central sections, where a minimum width of 147 feet 6 inches is believed to be sufficient for the requirements of the immediate future.

The work of enlarging the capacity of the Canal presents no special difficulty on the engineering side. A good deal of sand is occasionally driven into the channel at Port Said during storms, but a remedy for this will be found in extension of the west breakwater by about 2,700 yards at a cost of over £6,000,000. The construction of this extension, which has been in hand for the past two years, is making satisfactory progress. The Suez Roads are being adequately dredged in accordance with an agreement between the Egyptian Government and the Company.

Almost up to the end of 1915 the works for extending the jetty to the west of Port Said, works of capital importance for the **protection of the entry** to the Canal, were pushed on uninterruptedly. In November, however, for want of hydraulic lime, the manufacture of artificial rocks for this jetty was interrupted. The submarine foundations in stone and rubble of the new jetty were, as a matter of fact, completed to a length of 2,500 metres; the protective blocks were laid for 1,040 metres, and cemented for over 800 metres. The protection of the Channel is thus secured, and there is no need for any apprehension as to its future.

Travel in India.

Twenty years ago, a tour in India was possible only to the wealthy, the leisured and those who had friends in the country. The cost of the journey was very high, the methods of transportation were very slow; and the facilities for travel were so indifferent that it was a bold man who consigned himself to the mercies of the country without a sheaf of letters of introduction. Now the mail which in peace time is posted in London on Friday night, reaches Bombay in thirteen and a half days, and the passenger can travel by the same route and with the same speed as the mail. A dozen lines have covered the sea route between Europe and India and Ceylon with a plexus of regular services. The Indian Railways provide facilities on the trunk lines unsurpassed by the *trains-de-luxe* of Europe, and the Indian hotel has grown into a really comfortable caravan-serai.

In the touring season, which extends from November to March, there is the attraction of a perfect climate. It is never very hot; in the North indeed it is really cool, it is always fine and fresh and bracing. If there is one country in the world to which that elusive term applies, here we have at the season when the tourist arrives the real "Indian summer." Then there is its infinite variety. India is in no sense a nation and never will be. Its peoples are wide as the Poles asunder, each has its own art, its own architecture, its own customs and its own civilisation. A certain superficial resemblance runs through each; beneath lies a never-ending variety which age cannot wither nor custom stale.

The Grand Tour.—People coming to India for the first time so often ask:—"Where shall I go?" Well, wherever else the tourist may go, whatever else he should leave out, he should omit nothing on the Grand Tour. It is the foolish custom nowadays to sneer at those who follow the beaten tracks, but the visitor who shuns any part of the orthodox journey across India misses what nothing else can repay. **Bombay** is by far the most convenient point of departure, for here "the world end steamers wait," here is one of the finest cities in the British Empire, and here the traveller can best complete his outfit and arrangements. From Bombay stretch northwards the two great trunk lines of India. One, the **Bombay Baroda & Central India Railway**, leads through the pleasant garden of Gujarat to Ahmedabad,

the ancient Moslem capital of the Province, containing fine examples of Mahomedans and Jain architecture; thence to Abu for the famous Jain temples of Dilwara, and on to Ajmere, Jaipur and Agra. The other by the **Great Indian Peninsula Railway** carries the tourist over the Western Ghats by a superb mountain railway to Gwalior, whose rock fortress rises like a giant battleship from the plain, and so on to Agra. Of the glories of the Taj Mahal, Agra Fort, and the deserted city of Fatehpur Sikri it were supererogatory to speak. Another easy stage leads to **Delhi** that amazing collection of cities, dominated by the little Ridge where British valour kept the mutinous hordes at bay, and finally drove them from the city by a feat of arms unsurpassed in history. Then from Delhi the East Indian line leads comfortably to Benares, Lucknow and Calcutta, with the opportunity of an excursion to Cawnpore, if the spirit moves. The great charm of the Grand Tour is that it reveals the best that India can show. This route has the additional advantage that it fits in with any digressions which the time and purse of the traveller may permit. No one who can spare the time should fail to push northwards from Delhi to Peshawar, where the flower of the army keeps watch and ward over the Khyber, and up the dread Pass to the eyrie where the fort of Ali Masjid bars the way to all invaders. **Calcutta** is the best starting point for Darjeeling, though unfortunately the magnificent mountain panorama visible from there is often obscured at this season by mists. Then from Calcutta two alternatives open. A fine service of mail steamers leads to **Burma**, and one of the unforgettable memories of the East is a voyage down the Irrawaddy from Bhamo or Mandalay to Prome. Again, either direct from Calcutta, or *via* Burma, is an easy route to **Madras** and by way of Madura and Trichinopoly, with their peerless Hindu temples, back to Bombay, or on through Tuticorin to **Colombo**. But indeed the possibilities of expanding this tour are endless. Bombay is the best centre for the rock temples of Elephanta, Kenheri, Karli, Ellora and Ajanta. Calcutta is only a short distance from Puri the one Indian temple where there is no caste, and perhaps the most remarkable Hindu temple in the country. From Calcutta also start the river steamers which thread the steamy plains of Bengal and run to the tea gardens of Assam.

SPECIMEN TOURS.

A number of specimen tours in India are given below. They are taken from one of Messrs. Thos. Cook & Son's publications, from which firm further information may be obtained. The

traveller will also find he can obtain assistance from the principal Shipping Agents and Railway Companies, or from Messrs. Cox & Co., Messrs. Grindlay & Co., and Messrs King, King & Co.

	1st Class.	2nd Class Rail, 1st Class Steamer.
FROM BOMBAY TO CALCUTTA.		
<i>Via the North-West Provinces to Calcutta (including side trip from Calcutta to Darjeeling).</i>	Rs. a.	Rs. a.
TOUR I.—From Bombay per B. B. & C. I. Railway <i>via</i> Ahmedabad, Abu Road (for Mount Abu), Ajmer, Jaipur, Delhi, Agra, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	266 4	133 3
TOUR II.—From Bombay per G. I. P. Railway <i>via</i> Itarsi, Gwalior, Agra, Delhi, Tundla Junction, Cawnpore, Lucknow and Benares to Calcutta, thence to Darjeeling, and back to Calcutta	267 15	134 7
FROM BOMBAY TO COLOMBO.		
<i>Via the North-West Provinces, Calcutta and Southern India to Colombo (including side trip from Calcutta to Darjeeling).</i>		
TOUR III.—From Bombay as in Tour No. I (<i>via</i> B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence <i>via</i> Khurda Road, for Puri (Jugganath), Madras, Tanjore, Trichinopoly, Madura, Danushkodi and Talaimannar to Colombo	423 8	212 13
TOUR IV.—From Bombay as in Tour No. II (<i>via</i> G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence as in Tour No. III to Colombo (<i>via</i> Southern India)	426 0	213 0
<i>Via the North-West Provinces, Calcutta (including Darjeeling), Burma and Southern India.</i>		
TOUR V.—From Bombay as in Tour No. I (<i>via</i> B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay. Irrawaddy Steamer to Prome, Rail to Rangoon; British India Steamer to Madras, Rail <i>via</i> Tanjore, Trichinopoly, Madura to Danushkodi; Steamer to Talaimannar and Rail to Colombo	586 13	399 12
TOUR VI.—From Bombay as in Tour No. II (<i>via</i> G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, thence as in Tour No. V to Colombo	587 6	400 0
FROM BOMBAY TO RANGOON.		
<i>Via the North-West Provinces and Calcutta to Rangoon (including a tour in Burma, also including a side trip from Calcutta to Darjeeling).</i>		
TOUR VII.—From Bombay as in Tour No. I (<i>via</i> B. B. & C. I. Ry., Jaipur and the North-West Provinces) to Calcutta side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon, Rail to Mandalay, Irrawaddy Steamer to Prome, Rail to Rangoon	447 9	288 14
TOUR VIII.—From Bombay as in Tour II (<i>via</i> G. I. P. Ry., Itarsi, Agra and the North-West Provinces) to Calcutta, side trip to Darjeeling and back to Calcutta, thence British India Steamer to Rangoon. Rail to Mandalay, Irrawaddy, Steamer to Prome, Rail to Rangoon	450 2	290 0

	1st Class.	2nd Class Rail, 1st Class Steamer.
FROM CALCUTTA TO BOMBAY.		
<i>Via the North-West Provinces.</i>	Rs. a.	Rs. a
TOUR IX.—From Calcutta <i>via</i> Benares, Lucknow, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu), Ahmedabad and Baroda to Bombay	165 5	82 11
TOUR X.—From Calcutta <i>via</i> Benares, Moghal Serai, Cawnpore, Tundla, Agra, Delhi, Rewari, Jaipur, Ajmer (for Udaipur), Abu Road (for Mt. Abu) Ahmedabad and Baroda to Bombay	167 7	83 13
TOUR XI.—From Calcutta <i>via</i> Benares, Moghal Serai, Cawnpore, Tundla, Agra, Gwalior and Itarsi to Bombay	119 1	74 9
TOUR XII.—From Calcutta <i>via</i> Benares, Moghal Serai, Cawnpore, Delhi, Muttra, Agra, Gwalior and Itarsi to Bombay	167 14	83 15
CIRCULAR TOUR FROM CALCUTTA.		
TOUR XIII.—From Calcutta <i>via</i> Benares, Lucknow, Cawnpore, Tundla, Agra, Bandikui, Jaipur, Delhi, and Allahabad to Calcutta	191 1	95 9
<i>Extensions, Via Southern India to Colombo.</i>		
TOUR XIV.—From Bombay <i>via</i> Poona, Hyderabad, Wadi, Raichur, Madras, Tanjore, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	154 6	77 13
TOUR XV.—From Bombay <i>via</i> Poona, Hyderabad, Wadi, Guntakal, Bangalore, Erode, Trichinopoly, Madura, Danushkodi, and Talaimannar to Colombo	148 5	74 12
<i>Extensions to above Tours.</i>		
From Ajmer to Udaipur and return	34 12	17 6
From Abu Road to Mount Abu and return, one seat in Tonga (This excursion is strongly recommended, the scenery being very beautiful) ..	7 0	....
From Delhi to Lahore and return <i>via</i> Umballa and Amritsar	58 2	29 2
From Delhi <i>via</i> Bhatinda, Ferozepore to Lahore, returning <i>via</i> Amritsar Umballa to Delhi	56 15	28 8
From Calcutta to Darjeeling and return	101 0	50 8
From Colombo to Kandy and return	13 8	9 0
From Kurda Road to Puri (Jagganath and return)	5 4	2 10

(All fares subject to change without previous notice.)

LIST OF HOTELS IN INDIA.

The following list of hotels is largely based on information kindly supplied by Messrs. Thos. Cook & Son, Bombay:—

AGRA.—Cecil, Laurie's Great Northern, Metropolitan, Carlton.

AHMEDABAD.—Grand, Empire.

ALLAHABAD.—Central, Grand.

BANGALORE.—West End, Cubbon.

BENARES.—Clark's, Hotel de Paris.

BOMBAY.—Taj Mahal, Majestic, Apollo, Watson's.

CALCUTTA.—Great Eastern, Grand, Spence's, Continental.

CAWNPORE.—Civil and Military.

DELHI.—Cecil, Maiden's, Civil and Military.

GOA.—Crescent.

GULMARG.—Nedou's.

GWALIOR.—Gwalior Hotel.

HYDERABAD (Deccan).—Montgomery's.

JEYPURE.—Jeypore, Kaisar-i-Hind, The New Hotel.

JUBBULPORE.—Jackson's.

KARACHI.—North-Western, Killarney

LAHORE.—Nedou's, Cecil.

LUCKNOW.—Royal, Carlton, Imperial, Civil and Military.

MADRAS.—Hotel D'Angelis, Connemara, Brind's

MANDALAY.—Salween House.

MEERUT.—Empress.

PESHAWAR.—Flashmans.

POONA.—Napier, Poona, Connaught.

RANGOON.—Strand, Royal, Minto Mansions.

RAWAL PINDI.—Flashmans, Imperial.

SEUNDERABAD.—Montgomery's.

HOTELS IN PRINCIPAL HILL STATIONS:—

COONOR.—Glenview.

DARJEELING.—Woodland's, Mount Everest, Grand (Rockville), Drum Druid.

MAHABLESHWAR.—Race View.

MASHOBRA.—Wild Flower Hall.

MATHERAN.—Rugby.

MOUNT ABU.—Rajputana.

MURREE.—Powell's, Rowbury's, Viewforth

MUSSOORIE.—Charleville, Savoy.

NAINI TAL.—Metropole, Grand.

OOTACAMUND.—Syk's, Centre, Firgrove.

PACHMARHI.—Hill.

SIMLA.—Corstorphon's, Grand, Lauries, Longwood, Faletti's, Royal.

An Indian Glossary.

- ABKARI.**—Excise of liquors and drugs.
- AIN.**—A timber tree, *TERMINALIA TOMENTOSA*.
- AMIL.**—A subordinate executive official under native rule; in Sind the name is still applied to Hindus of the clerical class.
- ANICUT.**—A dam or weir across a river for irrigation purposes, Southern India.
- ANJUMAN.**—A communal gathering of Mahomedans.
- APHUS.**—Believed to be a corruption of ALPHONSE, the name of the best variety of Bombay mango.
- AUS.**—The early rice crop, Bengal; syn. **Ahu**, Assam.
- AVATAR.**—An incarnation of Vishnu.
- BABU.**—(1) A gentleman in Bengal, corresponding to Pant in the Deccan and Konkan.
(2) Hence used by Anglo-Indians of a clerk or accountant.
- BABUL.**—A common thorny tree, the bark of which is used for tanning, *ACACIA ARABICA*.
- BAGHLA.**—(1) A native boat (Buggalow).
(2) The common pond heron or paddybird.
- BAIRAGI.**—A Hindu religious mendicant.
- BAJRA or BAJRI.**—The bulrush millet, a common food-grain, *PENNISETUM TYPHODEUM*; syn. **cambu**, Madras.
- BAND.**—A dam or embankment (**Bund**).
- BANYAN.**—A species of fig-tree, *FICUS BENGALENSIS*.
- BARSAT.**—(1) A fall of rain, (2) the rainy season.
- BASTI.**—(1) A village, or collection of huts, (2) A Jain temple, Kanara.
- BATTA.**—Lit. 'discount,' and hence allowances by way of compensation.
- BAZAR.**—(1) A street lined with shops, India proper; (2) a covered market, Burma.
- BER.**—A thorny shrub bearing a fruit like a small plum, *ZIZYPHUS JUJUBA*.
- BEWAR.**—Name in Central Provinces for shifting cultivation in jungles and hill-sides; syn. **taungya**, Burma; **jhum**, North-Eastern India.
- BHADOI.**—Early autumn crop, Northern India, reaped in the month Bhadon.
- BHANG.**—The dried leaves of the hemp plant, *CANNABIS SATIVA*, a narcotic.
- BHANWAR.**—Light sandy soil; syn. **bhur**.
- BHARAL.**—A Himalayan wild sheep, *OVIS NAHURA*.
- BHENDI.**—A succulent vegetable (*HIBISCUS ESCULENTUS*).
- BHUSA.**—Chaff, for fodder.
- BHUT.**—The spirit of departed persons.
- BIDRI.**—A class of ornamental metalwork, in which blackened pewter is inlaid with silver, named from the town of Bidar, Hyderabad.
- BIGHA.**—A measure of land, varying widely; the standard bigha is generally five-eighths of an acre.
- BIR (BID).**—A grassland—North India.
- BLACK COTTON SOIL.**—A dark-coloured soil, very retentive of moisture, found in Central and Southern India.
- BOARD OF REVENUE.**—The chief controlling revenue authority in Bengal, the United Provinces and Madras.
- BOR.**—See **BER**.
- BRINJAL.**—A vegetable, *SOLANUM MELONGENA*; syn. **egg-plant**.
- BUNDER, or bandar.**—A harbour or port.
- BURJ.**—A bastion in a line of battlements.
- CADJAN.**—Palm leaves, used for thatch.
- CHABUTRA.**—A platform of mud or plastered brick, used for social gatherings, Northern India.
- CHADAR.**—A sheet worn as a shawl by men and sometimes by women. (**Chudder**.)
- CHAITYA.**—An ancient Buddhist chapel.
- CHAMBAR (CHAMAR).**—A caste whose trade is to tan leather.
- CHAMPAK.**—A tree with fragrant blossoms, *MICHELIA CHAMPACA*.
- CHAPATI.**—A cake of unleavened bread. (**Chaupatti**.)
- CHAPRASI.**—An orderly or messenger, Northern India; syn. **pattawala**, Bombay; **peon**, Madras.
- CHARAS.**—The resin of the hemp plant, *CANNABIS SATIVA*, used for smoking.
- CHARPAI (charpoy).**—A bedstead with four legs, and tape stretched across the frame for a mattress.
- CHAUDHRI.**—Under native rule, a subordinate revenue official; at present the term is applied to the headman or representative of a trade guild.
- CHAUKIDAR.**—The village watchman and rural policeman.
- CHAUTH.**—The fourth part of the land revenue, exacted by the Marathas in subject territories.
- CHELA.**—A pupil, usually in connexion with religious teaching.
- CHHAONI.**—A collection of thatched huts or barracks; hence a cantonment.
- CHHATRI.**—(1) An umbrella, (2) domed building such as a cenotaph.

Note.—According to the Hunterian system of transliteration here adopted the vowels have the following values:—a either long as the a in 'father,' or short as the u in 'cut,' e as the ai in 'gain,' i either short as the i in 'bib,' or long as the ee in 'feel,' o as the o in 'bone,' u either short as the oo in 'good,' or long as the oo in 'boot,' ai as the i in 'mile,' au as the ou in 'grouse.' This is only a rough guide. The vowel values vary in different parts of India in a marked degree. The consonantal values are too intricate for discussion here.

CHIEF COMMISSIONER.—The administrative head of one of the lesser Provinces in British India.

CHIKOR.—A kind of partridge, *CACCABIS CHUCAR*.

CHIKU.—The Bombay name for the fruit of *ACHRAS SAPOTA*, the Sapodilla plum of the West Indies.

CHINAR.—A plane tree, *PLATANUS ORIENTALIS*.

CHINKARA.—The Indian gazelle, *GAZELLA BENNETTI*, often called 'ravine deer.'

CHITAL.—The spotted deer, *CERVUS AXIS*.

CHOLAM.—Name in Southern India for the large millet, *ANDROPOGON SORGHUM*; syn. jowar.

CHOLI.—A kind of short bodice worn by women.

CHUNAM, chuna.—Lime plaster.

CIRCLE.—The area in charge of—(1) A Conservator of forests; (2) A Postmaster or Deputy Postmaster-General; (3) A Superintending Engineer of the Public Works Department.

CIVIL SURGEON.—The officer in medical charge of a District.

COGNIZABLE.—An offence for which the culprit can be arrested by the police without a warrant.

COLLECTOR.—The administrative head of a District in Regulation Provinces corresponding to the Deputy Commissioner in non-regulation areas.

COMMISSIONER.—(1) The officer in charge of a Division or group of Districts; (2) the head of various departments, such as Stamps, Excise, etc.

COMPOUND.—The garden and open land attached to a house. An Anglo-Indian word perhaps derived from 'kumpan', a hedge.

CONSERVATOR.—The Supervising Officer in charge of a Circle in the Forest Department.

COUNCIL BILLS.—Bills or telegraphic transfers drawn on the Indian Government by the Secretary of State in Council.

COUNT.—Cotton yarns are described as 20's, 30's, etc., counts when not more than a like number of hanks of 840 yards go to the pound avoirdupois.

COURT OF WARDS.—An establishment for managing estates of minors and other disqualified persons.

CRORE, karor.—Ten millions.

DAFFADAR.—A non-commissioned native officer in the army or police.

DAH OR DAO.—A cutting instrument with no point, used as a sword, and also as an axe, Assam and Burma.

DAK (dawk).—A stage on a stage coach route. Dawk bungalow is the travellers' bungalow maintained at such stages in days before railways came.

DAKAITI, DACOITY.—Robbery by five or more persons.

DAL.—A generic term applied to various pulses.

DAM.—An old copper coin, one-fortieth of a rupee.

DARBAR.—(1) A ceremonial assembly, especially one presided over by the Ruler of a State, hence (2) the Government of a Native State.

DARGAH.—A Mahomedan shrine or tomb of a saint.

DARI, Dhurrie.—A rug or carpet, usually of cotton, but sometimes of wool.

DAROGHA.—The title of officials in various departments; now especially applied to subordinate controlling Officers in the Police and Jail Departments.

DARWAN.—A door-keeper.

DARWAZA.—A gateway.

DEBOTTAR.—Land assigned for the upkeep of temples or maintenance of Hindu worship.

DEODAR.—A cedar, *CEDRUS LIBANI* or *C. DEODARA*.

DEPUTY COMMISSIONER.—The Administrative head of a District in non-regulation areas corresponding to the Collector in Regulation Provinces.

DEPUTY MAGISTRATE AND COLLECTOR.—A subordinate of the Collector, having executive and judicial (revenue and criminal) powers; equivalent to Extra Assistant Commissioner in non-regulation areas.

DESAI.—A revenue official under native (Maratha) rule.

DESH.—(1) Native country; (2) the plains as opposed to the hills, Northern India; (3) the plateau of the Deccan above the Ghats.

DESHMUH.—A petty official under native (Maratha) rule.

DEVA.—A deity.

DEVASTHAN.—Land assigned for the upkeep of a temple or other religious foundation.

DHAK.—A tree, *BUTEA FRONDOSA*, with brilliant orange-scarlet flowers used for dyeing, and also producing a gum; syn. palas, Bengal and Bombay; Chhiul, Central India.

DHAMANI.—A heavy shighram or tonga drawn by bullocks.

DHARMSALA.—A charitable institution provided as a resting-place for pilgrims or travellers, Northern India.

DHATURA.—A stupefying drug, *DATURA FASTUOSA*.

DHENKLI.—Name in Northern India for the lever used in raising water; syn. picottah.

DHOBI.—A washerman.

DHOTI.—The loincloth worn by men.

DISTRICT.—The most important administrative unit of area.

DIVISION.—(1) A group of districts for administrative and revenue purposes, under a Commissioner; (2) the area in charge of a Deputy Conservator of Forests, usually corresponding with a (revenue) District; (3) the area under a Superintendent of Post Offices; (4) a group of (revenue) districts under an Executive Engineer of the Public Works Department.

DIWAN.—The chief minister in a Native State.

DIWANI.—Civil, especially revenue, administration; now used generally in Northern India of civil justice and Courts.

DOAB.—The tract between two rivers, especially that between the Ganges and Jumna.

DRY CROP.—A crop grown without artificial irrigation.

DRY RATE.—The rate of revenue for unirrigated land.

DUN.—A valley, Northern India.

EKKA.—A small two-wheeled conveyance drawn by a pony, Northern India.

EXTRA ASSISTANT COMMISSIONER.—See Deputy Magistrate and Collector.

FAKIR.—Properly an Islamic mendicant or a mendicant who has no creed, but often loosely used of Hindu mendicants also.

FAMINE INSURANCE GRANT.—An annual provision from revenue to meet direct famine expenditure, or the cost of certain classes of public works, or to avoid debt.

FARMAN.—An imperial (Mughal) order or grant.

FAUJDARI.—Under native rule, the area under a Faujdar or subordinate governor; now used generally of Magistrates' Criminal Courts.

FINANCIAL COMMISSIONER.—The chief controlling revenue authority in the Punjab, Burma and the Central Provinces.

GADDI, GADI.—The cushion or throne of (Hindu) royalty.

GANJA.—The unfertilised flowers of the cultivated female hemp plant, *CANNABIS SATIVA*, used for smoking.

GAUR.—Wild cattle, commonly called 'bison', *BOS GAURUS*.

GAYAL.—A species of wild cattle, *BOS FRONTALIS*, domesticated on the North-East Frontier; syn. mithan.

GHAT, Ghaut.—(1) A landing-place on a river; (2) the bathing steps on the bank of a tank; (3) a pass up a mountain; (4) in European usage, a mountain range. In the last sense especially applied to the Eastern and Western Ghats.

GHATWAL.—A tenure-holder who originally held his land on the condition of guarding the neighbouring hill passes (ghats), Bengal.

GHI, Ghee.—Clarified butter.

GINGELLY.—See TIL.

GODOWN.—A store room or warehouse. An Anglo-Indian word derived from the Malay 'gadang'.

GOPURAM.—A gateway, especially applied to the great temple gateways in Southern India.

GOSAIN, Goswami.—A (Hindu) devotee; lit. one who restrains his passions.

GOSHA.—Name in Southern India for 'caste' women; lit. 'one who sits in a corner'; syn. parda.

GRAM.—A kind of pea, *CICER ARIETINUM*. In Southern India the pulse *DOLICHOS BIFLORUS* is known as horse gram.

GUARANTEED.—(1) A class of Native States in Central India; (2) A class of railways.

GUNJ.—The red seed with a black 'eye' of *ABRUS PRECATORIUS*, a common wild creeper, used as the official weight for minute quantities of opium 12th TOLA.

GUR, Goor.—Crude sugar; syn. jaggery, southern India; tanyet, Burma.

GURAL.—A Himalayan goat antelope, *CEMAS GORAL*.

GURU.—(1) A Hindu religious preceptor; (2) a schoolmaster, Bengal.

HAJ.—Pilgrimage to Mecca.

HAJJI.—A mahomedan who has performed the haj. He is entitled to dye his beard red.

HAKIM.—A native doctor practising the Mahomedan system of medicine.

HATAKHOOR.—A sweeper or scavenger; lit. one to whom everything is lawful food.

HALI.—Current. Applied to coin of Native States, especially Hyderabad.

HAMAL.—(1) A porter or cooly, (2) a house servant.

HEJIRA (HIJRAH).—The era dating from the flight of Mahomed to Mecca, June 20th, 622 A.D.

HILSA.—A kind of fish, *CLUPEA ILISHA*.

HTI.—An iron pinnacle placed on a pagoda in Burma.

HUKKA, HOOKAH.—The Indian tobacco pipe.

INGAH.—An enclosed place outside a town where Mahomedan services are held on festivals known as the Id., etc.

INAM.—Lit. 'reward'. Hence land held revenue free or at a reduced rate, often subject to service. See DEVASTHAU, SARANJAM, WATAN.

INUNDATION CANAL.—A channel taken off from a river at a comparatively high level, which conveys water only when the river is in flood.

JACK FRUIT.—Fruit of *ARTOCARPUS INTEGRIFOLIA*, ver. PHANAS.

JAGGERY, jagri.—Name in Southern India for crude sugar; syn. gur.

JAGIR.—An assignment of land, or of the revenue of land held by a Jagirdar.

JEMADAR.—A native officer in the army or police.

JHIL.—A natural lake or swamp, Northern India; syn. bil, Eastern Bengal and Assam.

JIHAD.—A religious war undertaken by Musalmans.

JIRGA.—A council of tribal elders, North-West frontier.

JOWAR.—The large millet, a very common food-grain, *ANDROPOGON SORGHUM*, or *SORGHUM VULGARE*; syn. cholam and jola, in Southern India.

JUDICIAL COMMISSIONER.—An officer exercising the functions of a High Court in the Central Provinces, Oudh, and Sind.

KACHERI, kachahri.—An office or office building, especially that of a Government official.

KADAR, karbi.—The straw of jowari (*q. v.*)—a valuable fodder.

KAJU, kashew.—The nut of *ANACARDIUM OCCIDENTALE* largely grown in the Konkan.

KAKAR.—The barking deer, *CERVULUS MUNTJAC*.

KALAR, kallar.—Barren land covered with salt or alkaline efflorescences, Northern India.

KAMARBAND, Cumberbund.—A waistcloth, or belt.

KANAT.—The wall of a large tent.

KANGAR.—A kind of portable warming-pan, carried by persons in Kashmir to keep themselves warm.

KANKAR.—Nodular limestone, used for metal-ling roads, as building stones or for preparation of lime.

KANS.—A coarse glass which spreads and prevents cultivation especially in Rundelkhand, SACCHARUM SPONTANEUM.

KANUNGO.—A revenue Inspector.

KARAIT.—A very venomous snake, BUN-GARUS CANDIDUS or CAERULEUS.

KARBHARI.—A manager.

KAREZ.—Underground tunnels near the skirts of hills, by which water is gradually led to the surface for irrigation, especially in Baluchistan.

KARKUN.—A clerk or writer, Bombay.

KARMA.—The doctrine that existence is conditioned by the sum of the good and evil actions in past existences.

KARNAM.—See PATWARI.

KAZI.—Under native rule, a judge administering Mahomedan law. Under British rule, the kazi registers marriages between Mahomedans and performs other functions, but has no powers conferred by law.

KHALASI.—A native fireman, sailor, artilleryman, or tent-pitcher.

KHALSA.—Lit. 'pure.' (1) Applied especially to themselves by the Sikhs, the word Khalsa being equivalent to the Sikh community; (2) land directly under Government as opposed to land alienated to grantees, etc., Northern India.

KHANDI, candy.—A weight especially used for cotton bales in Bombay—equivalent to 20 mds.

KHARAB.—In Bombay of any portion ran assessed survey No. which being uncultivable is left unassessed.

KHARIF.—Any crops sown just before or during the main S. W. monsoon.

KHAS.—Special, in Government hands. Khas tahasildar, the manager of a Government estate.

KHASADAR.—Local levies of foot soldiers, Afghanistan.

KHAS-KHAS, Kus-Kus.—A grass with scented roots, used for making screens which are placed in doorways and kept wet to cool a house by evaporation, ANDROPOGON SQUAR-ROSUS.

KHEDDA, kheda.—A stockade into which wild elephants are driven; also applied to the operations for catching.

KHICHADI, kejjeree.—A dish of cooked rice and other ingredients, and by Anglo-Indians specially used of rice with fish.

KHILAT.—A robe of honour.

KHUTBA.—The weekly prayer for Mahomedans in general and for the reigning sovereign in particular.

KILLA.—A fort.

KINCOB, kamkhwab.—Silk textiles brocaded with gold or silver.

KODALI.—The implement like a hoe or mattock in common use for digging; syn. mamuti, Southern India.

KONKAN.—The narrow strip of low land between the Western ghats and the sea.

KOS.—A variable measure of distance, usually estimated at about two miles. The distance between the kos-minars or milestones on the Mughal Imperial roads averages a little over 2 miles, 4 furlongs, 150 yards.

KOT.—Battlements.

KOTHI.—A large house.

KOTWAL.—The head of the police in a town, under native rule. The term is still used in Hyderabad and other parts of India.

KOTWALI.—The chief police station in a head-quarters town.

KULKARNI.—See PATWARI.

KUMBHAR.—A potter.

KURAN.—A big grass land growing grass fit for cutting.

KYARI.—Land embanked to hold water for rice cultivation.

KYAUNG.—A Buddhist monastery, which always contains a school, Burma.

LAKH, lac.—A hundred thousand.

LAMBARDAE.—The representative of the co-sharers in a zamindari village, Northern India.

LANGUR.—A large monkey, SEMNOPITHECUS ENTELLUS.

LASCAR, correct lashkar.—(1) an army, (2) in English usage a native Sailor.

LAT.—A monumental pillar.

LATERITE.—A vesicular material formed of disintegrated rock, used for buildings and making roads; also probably valuable for the production of aluminium. Laterite produces a deep brichord soil.

LINGAM.—The phallic emblem, worshipped as the representative of Shiva.

LITCHI.—A fruit tree grown in North India (LITCHI CHINENSIS).

LOKAMANYA.—(lit.) Esteemed of the world or the people; a national hero.

LONGYI.—A waistcloth, Burma.

LOTA.—A small brass water-pot.

LUNGI, loongi.—(1) A turban; (2) a cloth worn by women.

MADRASA.—A school especially one for the higher instruction of Mahomedans.

MAHAJAN.—The guild by Hindu or Jain merchants in a city. The head of the Mahaj anssi, the Nagarsheth (q. v.).

MAHAL.—(1) Formerly a considerable tract of country; (2) now a village or part of a village for which a separate agreement is taken for the payment of land revenue; (3) a department of revenue, e.g., right to catch elephants, or to take stone; (4) in Bombay a small Taluka under a MAHALKARI.

MAHANT.—The head of a Hindu conventual establishment.

MAHARAJA.—A title borne by Hindus, ranking above Raja.

MAHATMA.—(lit.) A great soul; applied to men who have transcended the limitations of the flesh and the world.

MAHSEER, mahasir.—A large carp, BARBUS FOR (lit. 'the big-headed').

MAHUA.—A tree, *BASSIA LATIFOLIA*, producing flowers used (when dried) as food or for distilling liquor, and seeds which furnish oil.

MAIDAN.—An open space of level ground; the park at Calcutta.

MAJOR WORKS.—Irrigation works for which separate accounts are kept of capital, revenue, and interest.

MAKTAB.—An elementary Mahomedan school.

MALGUZAR (revenue payer).—(1) The term applied in the Central Provinces to a co-sharer in a village held in ordinary proprietary tenure; (2) a cultivator in the Chamba State.

MALI.—A gardener.

MAMLATDAR.—The officer in charge of a taluka, Bombay, whose duties are both executive and magisterial; syn. tahasildar.

MANDAP, or **mandapam.**—A porch or pillared hall, especially of a temple.

MANGOSTEEN.—The fruit of *GARCINIA MANGOSTANA*.

MARKHOR.—A wild goat in North Western India, *CAPRA FALCONERI*.

MASJID.—A mosque. *Jama Masjid*, the principal mosque in a town, where worshippers collect on Fridays.

MASNAD.—Seat of state or throne, Mahomedan; syn. gaddi.

MATH.—A Hindu conventual establishment.

MAULVI.—A person learned in Muhammadan law.

MAUND, ver. *Man.*—A weight varying in different localities. The Ry. maund is 80 lbs.

MAYA.—Sanskrit term for delusion.

MEHEL or **MAHAL.**—A palace.

MELA.—A religious festival or fair.

MIHRAB.—The niche in the centre of the western wall of a mosque.

MIMBAR.—Steps in a mosque, used as a pulpit.

MINAR.—A pillar or tower.

MINOR WORKS.—Irrigation works for which regular accounts are not kept, except, in some cases, of capital.

MISTRI.—(1) a foreman, (2) a cook.

MONSOON.—Lit. 'season,' and specifically (1) The S. W. monsoon, which is a Northward extension of the S. E. trades, which in the Northern Summer cross the equator and circulate into and around the low pressure area over North India, caused by the excessive heating of the land area, and (2) The N. E. monsoon, which is the current of cold winds blowing down during the Northern winter from the cold land areas of Central Asia, giving rain in India only in S. E. Madras and Ceylon through moisture acquired in crossing the Bay of Bengal, and passing across the equator into the low pressure areas of the Australasian Southern summit.

MUFASSAL, *mufussil.*—The outlying parts of a District, Province or Presidency, as distinguished from the head-quarters (*Sadr*).

MUKADDAM, *muccadam.*—A representative or headman.

MUKHTAR (corruptly *mukhtiar*).—(1) A legal practitioner who has not got a sanad, and therefore cannot appear in court as of right; (2) any person holding a power of attorney on behalf of another person.

MUKHTIARKAR.—The officer in charge of a taluka, Sind, whose duties are both executive and magisterial; syn. tahasildar.

MUKTI, 'release.'—The perfect rest attained by the last death and the final reabsorption of the individual soul into the world—soul, syn. *NIRVANA*, *MOKSHA*.

MUNG, *mug.*—A pulse, *PHASEOLUS RADICATUS*; syn. *mag*, Gujarat.

MUNJ.—(1) A tall grass (*SACCHARUM MUNJA* in North India, from which mats are woven, and the Brahman sacred thread worn; (2) the said thread.

MUNSHI.—A teacher of Hindustani or any Perso-Arabian language.

MUNSIF.—Judge of the lowest Court with civil jurisdiction.

MURUM, *moorum.*—Gravel, used for metal-ling roads.

NACHANI-NAGLI.—See *RAGI*.

NAGARKHANA, *Nakkarkhana.*—A place where drums are beaten.

NAGARSHETH.—The head of the trading guild of Hindu and Jain Merchants in a city.

NAIB.—Assistant or Deputy.

NAIK.—A leader, hence (1) a local chieftain, in Southern India; (2) a native officer of the lowest rank (corporal) in the Indian army.

NAT.—A demon or spirit, Burma.

NAWAB.—A title borne by Musalmans, corresponding roughly to that of *Raja* among Hindus.

NAZAR, *nazarana.*—A due paid on succession or on certain ceremonial occasions.

NET ASSETS.—(1) In Northern India, the rent or share of the gross produce of land taken by the landlord; (2) in Madras and Lower Burma, the difference between the assumed value of the crop and the estimate of its cost of production.

NEWAR.—Broad cockney woven across bedsteads instead of iron slats.

NGAPI.—Pressed fish or salted fish paste largely made and consumed in Burma.

NILGAI.—An antelope, *BOSELAPHUS TRAGOCAMELUS*.

NIM, *neem.*—A tree, *MELIA AZADIRACHTA*, the berries of which are used in dyeing.

NIRVANA.—See *MUKTI*.

NIZAM.—A title borne by the ruler of Hyderabad State.

NIZAMAT.—A sub-division of a Native State, corresponding to a British District, chiefly in the Punjab and Bhopal.

NON-AGRICULTURAL ASSESSMENT.—Enhanced assessment imposed when land already assessed as agricultural is diverted to use as a building site or for industrial concerns.

NON-COGNISABLE.—An offence for which the culprit cannot be arrested by the police without a warrant.

NON-OCCUPANCY TENANTS.—A class of tenants with few statutory rights, except in Oudh, beyond the terms in their leases or agreements.

NON-REGULATION.—A term formerly applied to certain Provinces to show that the regulations of full code of legislation was not in force in them.

NULLAH, NALA.—A ravine, watercourse, or drain.

OCCUPANCY TENANTS.—A class of tenants with special rights in Central Provinces, in United Provinces.

PADAUK.—A well known Burmese tree (*PTEROCARPUS* sp.) from the behaviour of which the arrival of the monsoon is prognosticated.

PADDY.—Unhusked rice.

PAGA.—A troop of horses among the Marathas.

PAGL.—A tracker thieves of strayed or stolen animals.

PAIGAH.—A tenure in Hyderabad State.

PAIK.—(1) A foot soldier; (2) in Assam formerly applied to every free male above sixteen years.

PAIRÉE.—The name of the second best variety of Bombay mango, distinguishable from the *APHUS* (*q. v.*) by its pointed tip, and by the colour being less yellow and more green and red.

PALAS.—See *DHAK*.

PALKI.—A palanquin or litter.

PAN.—The betel vine, *PIPE BETLE*.

PARAB.—A public place for the distribution of water, maintained by charity.

PARABADI.—A platform with a smaller platform like a dovecot on a centre pole or pillar built and endowed or maintained by charity, where grain is put every day for animals and birds.

PANCHAMA.—Low caste, Southern India.

PANCHAYAT.—(1) A committee for management of the affairs of a caste, village, or town; (2) arbitrators. Theoretically the panchayat has five (*panch*) members.

PANDIT.—A Hindu title, strictly speaking applied to a person versed in the Hindu scriptures, but commonly used by Brahmans. In Assam applied to a grade of Inspectors of primary schools.

PANSUPARI.—Distribution of *PAN* and *SUPARI* (*q. v.*) as a form of ceremonial hospitality.

PARDA, purdah.—(1) A veil or curtain; (2) the practice of keeping women secluded; syn. *gosha*.

PARDESI.—Foreign. Used in Bombay especially of Hindu servants, syces, &c., from North India.

PARGANA.—Fiscal area or petty sub-division of a *tahsil*, Northern India.

PASHM.—The fine wool of the Tibetan goat.

PASO.—A waistcloth.

PAT, put.—A stretch of firm, hard clay.

PATEL.—A village headman, Central and Western India; syn. *reddi*, Southern India, *gaonbura*, Assam; *padhan*, Northern and Eastern India: *Mukhi*, Guzarat.

PATIDAR.—A co-sharer in a village, Gujarat

PATTAWALLA.—See *CHAPRASI*.

PATWARI.—A village accountant; syn. *karnam*, Madras; *kulkarni*, Bombay Deccan; *talati*, Gujarat; *shanhog*, Mysore, Kanara and Coorg; *Mandal*, Assam; *Tapedar*, Sind.

PEON.—See *CHAPRASI*.

PESHKASH.—A tribute or offering to a superior.

PHULAY, (Pillow).—A dish of rice and other ingredients, and by Anglo-Indians specifically used of chicken with rice and spices.

PHULKARI.—An embroidered sheet; lit. flower-work.

PICE, paisa.—A copper or bronze coin worth one farthing; also used as a generic term for money.

PICOTTAH.—A lever for raising water in a bucket for irrigation, Southern India; syn. *dhenkul* or *dhenkuli*, or *dhikli*, Northern India.

PIPAL.—A sacred tree, *FICUS RELIGIOSA*.

PIR.—A Mahomedan religious teacher or saint.

PLEADER.—A class of legal practitioner.

PONGYI.—A Buddhist monk or priest, Burma.

POSTIN, poshteen.—A coat or rug of sheepskin tanned with the wool on, Afghanistan.

PRANT.—An administrative sub-division in Maratha States, corresponding to a British District (*Baroda*) or Division (*Gwalior*); also in Kathiawar.

PRESIDENCY.—A former Division of British India.

PROTECTED.—Forests over which a considerable degree of supervision is exercised, but less than in the case of 'reserved' forests.

PROVINCE.—One of the large Divisions of British India.

PUJA.—Worship, Hindu.

PUJARI.—The priest attached to a temple.

PUNDIT.—See *Pandit*.

PURANA.—Lit. 'old' Sanskrit (1) applied to certain Hindu religious books, (2) to a geological 'group'; (3) also to 'punch-marked' coins.

PUROHIT.—A domestic chaplain or spiritual guide, Hindu.

PWE.—An entertainment, Burma.

RABE.—Any crop sown after the main South-West monsoon.

RAGI (FLEUSINE COROCANA).—A small millet used as a food-grain in Western and Southern India; syn. *marua*, Nagli Nachni.

RAJA.—A title borne by Hindus and occasionally by Musalmans, corresponding roughly to that of *Nawab* which is peculiar to Musalmans.

RAMOSHI.—A caste whose work is watch and ward in the village lands and hence used of any *chaukidar* (*q. v.*).

RANA.—A title borne by some Rajput chiefs, equivalent to that of *Raja*.

RANI.—The wife or widow of a *Raja*.

RAO.—A title borne by Hindus, either equivalent to, or ranking below, that of *Raja*.

REGAR.—Name for a black soil in Central and Southern India, which is very retentive of moisture, and suitable for growing cotton.

REGULATION.—A term formerly applied to certain provinces to show that the Regulations or full code of legislation applied to them.

REH.—Saline or alkaline efflorescences on the surface of the soil, Northern India.

RESERVED.—Forests intended to be maintained permanently.

RICKSHAW.—A one or two seat vehicle on two wheels drawn by coolies, used in the hills.

ROHU.—A kind of fish, *LABEO ROHITA*.

RYOTWARI.—The system of tenure in which land revenue is imposed on the actual occupants of holdings.

SADR, sudder.—Chief (adjective). Hence the headquarters of a District; formerly applied to the Appellate Courts.

SAFFLOWER.—A thistle which yields a yellow dye from its petals and oil from its seeds (*CARTHAMUS TINCTORIUS*), ver. Kardai, Kushanti.

SAL.—A useful timber tree in Northern India, *SHOREA ROBUSTA*.

SAMBAR.—A deer, *CERVUS UNICOLOR*; syn. jarau.

SAN.—Bombay hemp, *CROTALARIA JUNCSEA*.

SANAD.—(1), A charter or grant, giving its name to a class of States in Central India held under a sanad, (2) any kind of deed of grants.

SANNYASI.—A Hindu mendicant.

SARI.—A long piece of cloth worn by women as a shawl.

SARANJAM.—Land held revenue free or on a reduced quit-rent in consideration of political services rendered by the holder's ancestors.

SARKAR.—(1) The Government; (2) a tract of territory under Muhammadan rule, corresponding roughly to a Division under British administration.

SARSUBAH.—An officer in charge of a Division in the Baroda State corresponding to Commissioner of British territories.

SATI.—Suicide by a widow, especially on the funeral pyre of her husband.

SATYAGRAHA.—(lit.) One possessed by the truth; one who follows the truth wherever it may lead. (Commonly used to denote the passive resistance movement.)

SAWBWA.—A title borne by chiefs in the Shan States, Burma.

SEMAL or cotton tree.—A large forest tree with crimson flowers and pods containing a quantity of floss, *BOMBAY MALABARICUM*.

SEROW, sarau.—A goat antelope, *NEMORHAEDUS BUBALINUS*.

SETTLEMENT.—(1) The preparation of a cadastral record, and the fixing of the Government revenue from land; (2) the local inquiry made before Forest Reserves are created; (3) the financial arrangement between the Government of India and Local Governments.

SHANBHOG.—See **PATWARI**.

SHASTRAS.—The religious law-books of the Hindus.

SHEGADI, seggaree.—A pan on 3 feet with live charcoal in it.

SHER, ser, seer.—A weight, or measure varying much in size in different parts of the country. The Railway ser is about 2 lbs.

SHETH, shethia.—A Hindu or Jain merchant.

SHIGURAM.—See **TONGA**.

SHISHAM or **sisso.**—A valuable timber tree, *DALBERGIA SISSOO*.

SILLADAR.—A native trooper who furnishes his own horse and equipment.

SOLA.—A water-plant with a valuable pith, *AESCHYNOMENE ASPERA*.

SOWAR.—A mounted soldier or constable.

STUPA or **tope.**—A Buddhist tumulus, usually of brick or stone, and more or less hemispherical, containing relics.

SUBAH.—(1) A province under Mahomedan rule; (2) the officer in charge of a large tract in Baroda, corresponding to the Collector of a British District; (3) a group of Districts or Division, Hyderabad.

SUBAHDAR.—(1) The governor of a province under Mahomedan rule; (2) a native infantry officer in the Indian Army; (3) an official in Hyderabad corresponding to the Commissioner in British territory.

SUB-DIVISION.—A portion of a District in charge of a junior officer of the Indian Civil Service or a Deputy Collector.

SUPARI.—The fruit of the betel palm, *ARECA CATECHU*.

SUPERINTENDENT.—(1) The chief police officer in a District; (2) the official in charge of a hill station; (3) the official, usually of the Indian Medical Service, in charge of a Central Jail.

SURTI.—Native of Surat, specially used of persons of the Dhed or Mahar caste who work as house servants of Europeans, and whose house speech is Gujarati.

SYCE, sais.—A groom.

TABUT.—See **TAZIAH**.

TAHSIL.—A revenue sub-division of a District; syn. taluka, Bombay; taluka, Madras and Mysore; township, Burma.

TAHSILDAR.—The officer in charge of a tahsil; syn. Mamlatdar, Bombay; township officer or myo-ok, Burma; Mukhtiarkar, Sind; Vahvatdar, Baroda. His duties are both executive and magisterial.

TAKAVI.—Loans made to agriculturists for seed, bullocks, or agricultural improvements; syn. tagai, Bombay.

TALATI.—See **PATWARI**.

TALAV, or talao.—A lake or tank.

TALUK, taluka.—The estate of a talukdar in Oudh. A revenue sub-division of a District, in Bombay, Madras and Mysore; syn. *tahsil*.

TALUKDAR.—A landholder with peculiar tenures in different parts of India. (1) An official in the Hyderabad State, corresponding to the Magistrate and Collector (First Talukdar) or Deputy Magistrates and Collectors (Second and Third Talukdars); (2) a landholder with a peculiar form of tenure in Gujarat.

TAMTAM, tumtum.—A North Indian name for a light trap or cart.

TANK.—In Southern, Western, and Central India, a lake formed by damming up a valley; in Northern India, an excavation holding water.

TAPEDAR.—See *PATWARI*.

TARAI.—A moist swampy tract; the term especially applied to the tract along the foot of the Himalayas.

TARI, toddy.—The sap of the date, palmyra, or coconut palm, used as a drink, either fresh or after fermentation. In Northern India the juice of the date is called *Sendhi*.

TASAR, tussore.—Wild silkworms, *ANTHRAEA PAPHIA*; also applied to the cloth made from their silk.

TAZIA.—Lath and paper models of the tombs of Hasan and Husain, carried in procession at the Muharram festival; syn. *tabut*.

TEAK.—A valuable timber tree in Southern and Western India and Burma, *TECTONA GRANDIS*.

TELEGRAPHIC TRANSFERS.—See Council bills.

THAGI, thuggee.—Robbery after strangulation of the victim.

THAKUR.—(1) The modern equivalent of the caste name *Kshattriya* in some parts of Northern India; (2) a title of respect applied to Brahmans; (3) a petty chief; (4) a hill tribe in the Western Ghats.

THAMIN.—The brow-antlered deer Burma, *CERVUS ELDI*.

THANA.—A police station, and hence the circle attached to it.

TIKA.—(1) Ceremonial anointing on the forehead; (2) vaccination.

TIKAM.—The English pickaxe (of which the word is a corruption).

TIL.—An oilseed, *SESAMUM INDICUM*; also known as *gingelly* in Madras.

TINDAL, tandel.—A foreman, subordinate officer of a ship.

TIPAL, Teapoy.—A table with 3 legs, and hence used of any small European style table.

TOLA.—A weight equivalent to 180 grains (troy).

TONGA.—A one or two horsed vehicle with a covered top. syn. *SHIGHRAM*.

TSINE.—Wild cattle found in Burma and to the southward, *BOS SONDAICUS*; syn. *hsaing* and *banteng*.

UNIT.—A term in famine administration, denoting one person relieved for one day.

URIAL.—A wild sheep in North-Western India, *OVIS VIGNEI*.

URID, UDID.—A pulse, 'black grain,' (*PHASEOLUS MUNGO*).

UMBAR.—A wild pig—(*FICUS GLOMERATA*).

USAR.—Soil made barren by saline efflorescence, Northern India.

VAHIVATDAR.—Officer in charge of a revenue sub-division, with both executive and magisterial functions, Baroda; syn. *tahsildar*.

VAID or baidya, Bengal.—A native doctor practising the Hindu system of medicine.

VAKIL.—(1) A class of legal practitioner; (2) an agent generally.

VIHARA.—A Buddhist monastery.

VILLAGE.—Usually applied to a certain area demarcated by survey, corresponding roughly to the English parish.

VILLAGE UNION.—An area in which local affairs are administered by a small committee.

WADA or WADI.—(1) an enclosure with houses built round facing a centre yard; (2) private enclosed land near a village.

WAKF.—A Muhammadan religious or charitable endowment.

WAO.—A step well.

WATAN.—A word of many senses. In Bombay Presidency used mostly of the land or cash allowance enjoyed by the person who performs some service useful for Govt. or to the village community.

WAZIR.—The chief minister at a Mahomedan court.

WET RATE.—The rate of revenue for land assured of irrigation.

YOGI.—A Hindu ascetic who follows the yoga system, a cardinal part of which is that it confers complete control over the bodily functions enabling the practiser, for instance to breathe in through one nostril and out at the other.

YUNANI.—Lit. Greek; the system of medicine practised by Mahomedans.

ZAMINDAR.—A landholder.

ZAMINDARI.—(1) An estate; (2) the rights of a landholder, zamindar; (3) the system of tenure in which land revenue is imposed on an individual or community occupying the position of a landlord.

ZANANA.—The women's quarters in a house hence private education of women.

ZIARAT.—A Mahomedan shrine, North-Western Frontier.

ZILA.—A District.

The New Capital.

The transfer of the capital of India from Calcutta to **Delhi** was announced at the Delhi Durbar on December 12, 1911. The reasons for it were stated in despatches between the Government of India and the Secretary of State published at the time. It had long been recognised as necessary, in the interests of the whole of India, to de-provincialise the Government of India, but this ideal was unattainable as long as the Government of India was located in one Province, and in the capital of that Province—the seat of the Bengal Government—for several months in every year. It was also desirable to free the Bengal Government from the close proximity of the Government of India which had been to the constant disadvantage of that Province. To achieve these two objects the removal of the capital from Calcutta was essential: its disadvantages had been recognised as long ago as 1868, when Sir Henry Maine advocated the change. Various places had been discussed as possible capitals, but Delhi was by common consent the best of them all. Its central position and situation as a railway junction, added to its historical associations, told in its favour; and, as Lord Crewe said in his despatch on the subject, "to the races of India, for whom the legends and records of the past are charged with so intense a meaning, this resumption by the Paramount Power of the seat of venerable Empire should at once enforce the continuity and promise the permanency of British sovereign rule over the length and breadth of the country."

The foundation stones of the new capital were laid by the King Emperor on December 15, 1911, when His Majesty said:—"It is my desire that the planning and designing of the public buildings to be erected will be considered with the greatest deliberation and care so that the new creation may be in every way worthy of this ancient and beautiful city." Subsequently a **town-planning committee** was appointed—consisting of Captain G. S. C. Swinton, Chairman, and Mr. J. A. Brodie and Sir Edwin Lutyns, members—to advise on the choice of a site for, and the lay-out of, the capital. Mr. V. Lanchester was subsequently consulted by Government on some aspects of the question. The terms of their original engagement (subsequently renewed) were stated by the Under Secretary of State to be:—"The members of the committee will receive their travelling and living expenses, and the following fees for a five months' engagement:—Captain Swinton, 500 guineas; Mr. Brodie, 1,750 guineas; Sir Edwin Lutyns, 1,500 guineas. The Secretary of State has also undertaken to refund to the Corporation of Liverpool the amount of Mr. Brodie's salary for the period of the absence."

Delhi and its environs.—In their first report, dated from Simla, 13th June 1912, the Committee explain that, in dealing with the choice of a site, they felt that the following considerations were paramount and must receive the closest and most continual attention:—(a) Health and sanitation, (b) water-supply and irrigation supply, (c) the provision of ample room for expansion, (d) an extent

of land suitable for the location of buildings of various characters and sizes and for the provision of spacious parks and recreation grounds—to be assumed at 10 square miles for the New City and 15 square miles for the Cantonment—(e) Cost of land and the cost of executing necessary works on different sites, (f) facility for external and internal communication, (g) Civil and Military requirements.

On the east of the Jumna they found no suitable site. To the north of Delhi, on the west of the Jumna, where the Durbar camps were pitched they found some general advantages. The area is, for example, upwind and upstream from the present city of Delhi. The ruins and remains of the Delhis of the past do not cumber the ground. While the external communications might need improvement, the tract is fairly well served by existing railways. Roads and canals and the internal communication could be made convenient without excessive expenditure, and a good deal of money has already been spent on the area. But its disadvantages were found to be overwhelming. The site is too small and much of the land is liable to flooding. Similarly, the western slope of the hills to the south of Delhi, the Naraina plain, was found unsuitable, mainly because it cannot be considered to be Delhi, is destitute of historical associations, and is shut out from all view of Delhi.

Southern site chosen.—The Committee finally selected a site on the eastern slopes of the hills to the south of Delhi, on the fringe of the tract occupied by the Delhis of the past. They describe it as follows:—"Standing a little to the Delhi side of the village of Malcha, just below the hills almost in the centre of the site, and looking towards the Jumna, Shah-jahan's Delhi on the left fills the space between the ridge and the river. Following down from the present city on the foreshore of the riverain, Firoz Shah's Delhi, the site of Indra Prastha, Humayun's fort, Humayun's tomb and Nizamuddin's tomb take the eye in a continuous progress to the rocky eminence on which Ghiyasuddin Tughlak erected his fortress city. On the right the Lal Kot, the Kutb, the Kila Rai Pithora, Siri and Jahanpanah complete the circle of the monuments of ancient Delhis. The mid space in the fore ground is filled by Safdar Jang's Mausoleum and the tombs of the Lodi dynasty, while to the left, towards Delhi, Jey Singh's gnomons and equatorial dials raise their fantastic shapes." The land chosen is free from liability to flood, has a natural drainage, and is not manworn. It is not cumbered with monuments and tombs needing reverent treatment, and the site is near the present centre of the town of Delhi.

Healthiness of Site.—In February, 1913, a Committee consisting of Surgn. General Sir C. P. Lukis, Mr. H. T. Keeling, C.S.I., A.M.I.C.E., and Major J. C. Robertson, I.M.S., was appointed to consider the comparative healthiness of the northern and southern sites. Their report, dated 4th March, 1913, states that "the Committee, after giving full consideration to the various points discussed in the above note, is bound to advise the Government of India that no doubt can exist as to the superior

healthiness of the southern site, the medical and sanitary advantages of which are overwhelming when compared with those of the northern site."

Report on Northern Site.—In the same month the Town-Planning Committee presented their second report, which dealt with the northern site. This had been elicited by the fact that in December, 1912, Sir Bradford Leslie, an engineer with a distinguished Indian career, had read a paper before the Indian section of the Royal Society of Arts in London, in which he set forth plans for building the new capital on the northern site and producing a fine water effect by a treatment of the river Jumna. This paper aroused considerable attention in England, and its publication synchronised with some letters and articles in the press in India expressing a preference for the northern site. The latter voiced a natural attraction to the north site which the Committee themselves experienced on their first visit to Delhi, and enunciated some predilections which the Committee had at one time felt and later abandoned. The Town Planning Committee, therefore, undertook to review once more, and in greater detail, the arguments for and against the northern site. They came to the conclusion that:—"The soil is poor on the northern site as compared with the southern. The southern site is already healthy and has healthy surroundings. The northern site even after expenditure on sanitary requirements will never be satisfactory. If the northern site is to be made healthy, this involves going outside the site itself and making the neighbourhood healthy also. The building land to the south is generally good. On the north to be used at all it has in places to be raised at considerable cost. There is no really suitable healthy site for a cantonment in proximity to a city on the northern site. The exigencies of fitting in the requirements to the limited area of the northern site endanger the success of a lay-out as a whole and tend to make for cramping and bad arrangement. The result of placing a city on the northern site appears to the Committee to be the creation of a bad example in place of a good one."

Final Town-Planning Report.—The final report of the Town-Planning Committee, with a plan of the lay-out, was dated 20th March, 1913. The central point of interest in the lay-out, which gives the motif of the whole, is Government House, and the large blocks of Secretariats. This Government centre has been given a position at Raisina hill near the centre of the new city. Advantage is taken of the height of this hill and it is linked with the high ground behind so as to appear a spur of the ridge itself. Behind the hill a raised platform or forum will be built. This will be flanked by the large blocks of Secretariat buildings and terminated at its western end by the mass of Government House with its wide flight of steps, portico and dome. The forum will be approached by inclined ways with easy gradients on both its north and south sides. The axis of the main avenue centres on the north-west gate of Indrapat nearly due east of Government House.

Looking from the eastern end of the forum where the broad avenue enters the Governmental centre and where the great stairways are set, the view is towards the east. "Right and left the roadways go and weld into one the empire of to-day with the empires of the past and unite Government with the business and lives of its people."

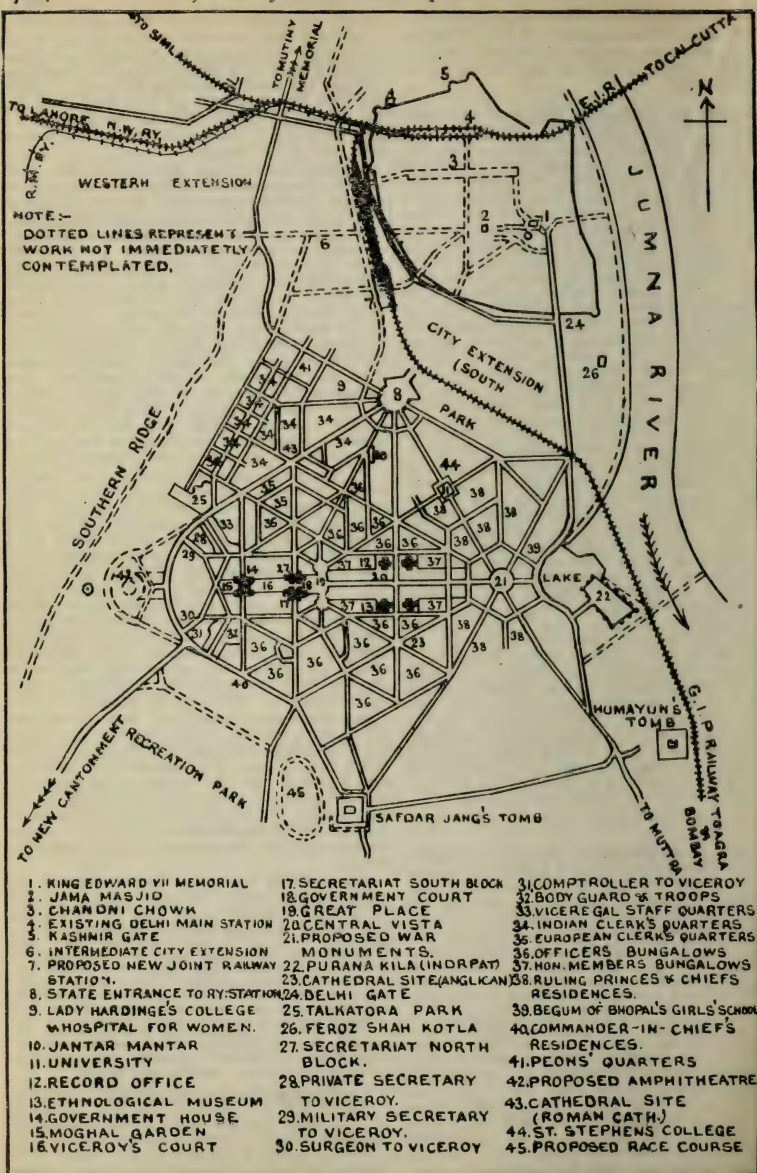
Behind Government House to the west will be its gardens and parks flanked by the general buildings belonging to the Viceregal estate. Beyond these again, on the ridge itself, will be a spacious amphitheatre to be made out of the quarry from which much of the stone for roads and buildings may be cut. Above this and behind it will lie the reservoir and its tower which will be treated so as to break the sky line of the ridge. To the east of the forum, and below it, will be a spacious forecourt defined by trees and linked on to the great main avenue or parkway which leads to Indrapat. Across this main axis, and at right angles to it, will run the avenue to the railway station. This will terminate in the railway station, the post office and business quarters at its northern end, and in the Cathedral at its southern extremity.

To the south-east will lie the park area in which stand the ancient monuments of Safdar Jang's Makhbara and the Lodi tombs. This area can be developed gradually as the city expands and has need of public institutions of various kinds. The axis running north-east from the Secretariat buildings to the railway station and towards the Jama Masjid will form the principal business approach to the present city. At the railway station a place will be laid out around which will be grouped the administrative and municipal offices, the banks, the shops and the hotels. On this place the post office is placed in symmetrical relation to the railway station.

The processional route will, lead down from the railway station, due south to the point where it is intersected by the main east to west axis. Here round a place will be gathered the buildings of the Ethnological Museum, the Library and the Imperial Record Office. To the south-west of the railway station will lie the houses of the local administration and the residences of the European clerks.

Due south of the forum the residence of the Commander-in-Chief will be placed. Round about the Viceregal estate and the forum lies the ground destined for the residences of the Secretaries and other officials of the Government of India. To the south-east of Government House lies the club. To the south of the club a low ridge divides the tract into two portions. That to the west is well adapted for a golf-course, while the eastern side is designed for a race-course, the ridge itself offering unusual facilities for locating stands and seeing the races.

Communications.—The avenues range from 76 feet to 150 feet in width with the exception of the main avenue east of the Secretariat buildings where a parkway width of 1,175 feet has been allowed. The principal avenues in addition to the main avenues are those running at right angles to the main east to west axis



Others form part of a system running from the amphitheatre to the railway station and Commander-in-Chief's residence, and from both the latter to the proposed War Memorial lying on the axis between Indrapat and Government House which is the focal point of the roads and avenues on the packway.

A lake which can be obtained by river treatment is shown on the plan. The lay-out has been made independent of the water effect, but the Committee think that its ultimate creation will enhance enormously the beauties and general amenities of the new capital; and it should and would become an integral portion of the design now submitted.

The report contains lengthy recommendations concerning water-supply, drainage, sewage system, parks and communications. It is imperative, it says:—"that a complete scheme of railway arrangements designed to serve the whole of the capital, both old and new, should be an essential feature of the lay-out of the Imperial City, and this important matter should not be left to be settled when it is too late to deal with it." The main lines of the lay-out as projected by the Committee have been accepted by Government. The expenses of the new central station and the difficulty experienced in meeting the various railway interests concerned will necessitate the postponement of this part of the scheme, and it has been decided that the needs of New Delhi will be met by a diversion of the existing Agra-Delhi Chord Railway to a line drawn eastward of Humayun's Tomb and Purana Killa and the construction of a new through station near the site of the proposed Central station. Another important modification consists in the reservation of the area lying south of the Delhi and Ajmere Gates of the city for the purpose of the extension of Old Delhi.

Nor is it now proposed to give effect to the extensive scheme of river training designed by the Town Planning Committee; and it is probable that little more will be done in this direction than to create a lake immediately at the end of the central vista and alongside the walls of Indrapat.

Temporary Capital.—For the use of the Government of India during the period of the building of the new capital—a period that will have to be extended owing to the conditions created by the war—an area has been selected along the Alipur Road, between the present civil station of Delhi and the Ridge. The early idea that many of the officials should live under canvas had to be given up, and there are now temporary offices and residences. The architecture and method of construction are similar to those adopted in the exhibition buildings at Allahabad in 1910; but the buildings will outlast the transitional period for which they are intended. They will subsequently be an asset of some value.

Chief Commissioner Appointed.—On October 1, 1912, by proclamation, there was constituted an administrative **enclave of Delhi** under a Chief Commissioner, Mr. W. M. Hailey, I.C.S. The Delhi district of the Punjab, from

which this enclave was entirely taken, consisted of three tahsils or subdivisions and the enclave was formed by the central tahsil, that of Delhi, and by such part of the southern tahsil, Ballabgarh, as was comprised within the limits of the police post of Mahrauli. Delhi Province as thus defined had originally an area of 528 square miles to which was added later an area of 45 square miles to the east of the Jumna river and taken from the United Provinces to serve as a grazing ground for the cattle for the city. The total area is, therefore, 573 square miles. On the basis of the Census of 1911, the population of the area originally included in the Province is 3,98,269 and of the new area 14,552, or a total of 4,12,821. The population of the Municipal town of Delhi is 2,29,144.

The Architects' Designs.—At the Royal Academy in 1914 there were exhibited drawings by Sir Edwin Lutyens and Mr. Baker, which though provisional and rather in the nature of what are called Warrant Designs, show how the architectural problems of the new capital are to be solved. Government House and the Secretariat have been planned by them as one block, as it were a Capital, facing towards Indrapat. The **Secretariat** is to be built on the rock of Raisina hill, the top of which has been levelled for the purpose: behind the Secretariat is to be a raised causeway forming the approach to Government House: and Government House itself is to be built on a high basement constructed on an outcrop of rock. The main processional route to Government House is to be along a sloping way (at a gradient of one in 22½) which leads from a semi-circular piazza, the "Great Place" to the level of the Secretariat buildings.

At the summit of this sloping way is the "**Government Court**", a space of about 1,100 feet in length, and 400 feet in breadth flanked to the north and south by the two blocks of Secretariat buildings. These buildings have been designed by Mr. Baker and the aggregate cost will be some Rs. 1,24,00,000. According to the design the eastern end of each block is marked by deep loggias looking out over the Central Vista. In the centre of each block is a dome. In the case of the north block this marks an Entrance Hall: in the south block it surmounts a Conference Hall with a suite of cloak and reception rooms. Each block contains four floors: on the main ground floor are the general offices of the Departments; on the first floor are the offices of members of Council, Secretaries, and other officers; whilst the remaining floors are occupied by clerk rooms and records. An essential feature of the design, and one which sets the character of the whole building, is the provision of loggias and recessed gate ways or exedrae giving views through to the fountain courts situate in the interior of the blocks, and these take the place of the continuous verandahs that are so familiar a feature in Indian buildings. The Architect relies for control of temperature on these loggias and recesses, on which external walls, together with the thick window shutters adopted so widely in Southern Europe, and the wide *chajja* characteristics of Oriental buildings.

Between the north and south Secretariat blocks, is the way into the "**Viceroy's Court**"—the raised causeway already referred to—leading up to Government House. The Court is about 600 feet in breadth and 1,300 feet in length; it will be treated with grass and water ways and low trees: and should form a dignified approach to the final group of buildings. At a point midway in the causeway, at which will be erected a column presented by the Maharajah of Jaipur, roads lead off to the north and south, forming alternative lines of approach to Government House.

One thus reaches the portico of **Government House**. This portico raised some twenty feet above the level of the Viceroy's Court and thirty-five feet above the surrounding country. The house itself centres round the great Durbar Hall, a domed structure which dominates the scheme of the buildings surrounding it. Grouped round the Durbar Hall are the State Rooms and great stairways from the entrance Courts on the north and south sides. Projecting from this central block are four wings, that on the south west containing the Viceroy's private apartments. In the south west wing, accommodation is provided for the A.D.C.'s to the Viceroy's. Guests are accommodated in the north west wing, whilst the north-east wing contains the officers of the Viceroy's Private and Military Secretaries and other members of his establishment. On the western side of the house will be a raised garden, walled and terraced after the manner of the Moghuls, and behind that again, on the level of the surrounding country, a park which will contain the staff houses and quarters. The park will extend to the rocky slopes of the Ridge which close in the vista on the west. The house will, with its attached quarters, garden and park, all of which have been designed by Sir Edwin Lutyens, cost approximately Rs. 95,00,000.

Style of Architecture.—There had been a prolonged "battle of the styles" over Delhi and if these designs gave satisfaction to neither of the extreme and opposed schools of thought, they clearly showed an endeavour to apply, with due regard for Indian sentiment, the spirit and essence of the great traditions of architecture to the solution of structural problems conditioned upon an Indian climate and Indian surroundings and requirements. To use the language of the architects themselves, it has been their aim "to express, within the limit of the medium and of the powers of its users, the ideal and the fact of British rule in India, of which the New Delhi must ever be the monument."

The inspiration of these designs is manifestly Western, as is that of British rule, but they combine with it distinctive Indian features without doing violence to the principles of structural fitness and artistic unity. Much will depend upon the resourcefulness and ability of the Indian artificers themselves whom the Government of India proposes to bring together in Delhi to give expression, by their decorative work, to the best traditions of skilled Indian craftsmanship.

Cost of the Scheme.—It was at first tentatively estimated that the cost of the new capital would be four million sterling and that sum

was given in the original despatch of the Government of India on the subject. This latest revised estimate sanctioned by the Secretary of State is as follows:—

Salaries and Allowances, including Travelling Allowances, Supplies, Services and Contingencies, Rs. 86,00,000.

WORKS EXPENDITURE:—(1a) Government House, Rs. 95,00,000; (1b) Secretariats, Rs. 1,24,00,000; (1c) Other Buildings, Rs. 2,04,66,400; (2) Communications, Rs. 34,50,000; (3) Miscellaneous Public Improvements, Rs. 25,25,000; (4) Electric Light and Power, Rs. 48,22,400; (5) Irrigation, Rs. 31,00,000; (6a) Storm Water Drains, Rs. 27,00,000; (6b) Sewerage, Rs. 17,08,000; (6c) Water Supply, Rs. 21,40,000; (6d) Conservancy, Rs. 5,00,000; (7) Purchase of Tools and Plant, Rs. 45,67,500; (8) Survey Expenses Preparation of Sites, Models, Service Roads, General Services other, Miscellaneous Expenditure, Rs. 56,34,000; (9) Maintenance during Construction, Rs. 35,63,500, (10) Railway Diversion, Rs. 8,00,000.

ACQUISITION OF LAND TAKEN UP, Rs. 35,50,852; other Miscellaneous Expenditure, Rs. 6,000. Deduct anticipated recovery by sale of tools and plant, Rs. 10,00,000. Net Total, Rs. 8,90,33,652. There is further reserve in hand of Rs. 26,70,648. The gross sanctioned total is therefore Rs. 9,17,04,300.

The Project Estimate contains certain items such as land, residences, water supply, electric light and power, and irrigation on which recoveries in the form of rate or taxes will, in addition to meeting current expenditure, partially at any rent cover the interest on the capital outlay whilst there are other items on which some return on account of the sale of leases, general taxes on and indirect receipts may be expected.

Progress of the work.—The construction of New Delhi has made satisfactory progress, having regard to the curtailment of the Budget allotment, in consequence of the war.

With the return of officers and other establishments to their civil work with the more liberal provision of money which will now be possible and with the increasing facilities for obtaining materials of all kinds both in India and from England, the work is now speeding up again. It is hoped that the work will be sufficiently advanced to permit of the government of India being carried on from the New Capital by the end of 1924.

Many of the European and Indian clerks quarters and the menials' quarters have been completed, and bungalows have been provided for the occupation of the works staff. Bungalows for the higher officials, in the neighbourhood of Government House, have been completed, and some were occupied in 1918.

Meanwhile the central point of interest in the plan has been given careful detailed consideration by the Government and the architects. The basements of Government House and the large blocks of Secretariats by which it will be

anked have been completed; substantial progress has been made with the Viceroy's Court, the Government Court between the two blocks of Secretariats, the Great place and with the laying out tree planting and waterways of the Central Vista. An indication of the progress at the Governmental centre on Raisina Hill was seen in the Royal Academy, where the statues of their Majesties in Coronation robes, which are to be placed in front of Government House, have been exhibited. That of the King, by Mr. Mackenna, is the gift of the Maharaja Scindia of Gwalior, and that of the Queen, by Sir George Frampton, is the gift of the Maharaja of Bikanir. The keen interest of the ruling princes in the transfer of the capital, which is very welcome to them, is further shown in the gift by the Maharaja of Jaipur of funds for a Column, designed by Sir Edwin Lutyens which is to be located midway in the Viceroy's Court. This Column is surmounted by the Star of India, and will be visible from many parts of the New City.

Two Cathedral Schemes.—In October 1913 a letter was published in *The Times* from the Bishop of Calcutta on the provision of a Cathedral at Delhi. He appealed for £50,000 in addition to any grant given by the Government, and quoted in his letter the following statement of approval by the King-Emperor: "I heartily approve of the project to build a Cathedral in the new city of Delhi. I trust that the appeal for the necessary funds may meet with a generous response, so that in due time the capital of India may possess a Cathedral which in design and character will testify to the life and energy of the Anglican Church and be worthy of its architectural surroundings both of days gone by and of those to come." His Majesty subscribed £100 and the Queen £50 to the fund. The Indian Church Aid Association have received several contributions towards the building fund for the proposed Cathedral Church, in response to the appeal of the Bishop of Calcutta. Cheques may be sent to the Secretary, Indian Church Aid Association, Church House, Westminster, S. W. and crossed Lloyds Bank, St. James's Street, S. W.

A Roman Catholic Cathedral is also projected and Father Paul Hughes, O.M.C., has been touring India collecting money for the Cathedral Fund.

Suggested War Memorial.—Suggestions have been made for completing the central avenue, sited upon Indrapat, by a stately colonnade, entered by three large gateways, to commemorate the Indian heroes of the war. The separate bays would be utilized for distinct memorials, regimental or communal, so that Hindu and Mahomedan, Sikh and Gurkha, Jat and Mah-ratta would have their respective niches.

Legislative Council Chamber.—In connection with the Indian Reform Scheme, it has become necessary to provide a Legislative Council Chamber Capable of accommodating the enlarged Council. This building will most probably be located on one of the triangular

sites a little to the north east of the northern block of the Secretariats. In the same building will probably be also provided a Chamber in which the Ruling Princes and Chiefs will hold their Annual Conferences.

Residencies for Ruling Princes and Chiefs.—Sites have already been allotted on which thirty three of the Ruling Princes and Chiefs propose to erect residences for occupation when visiting the New Capital. The States which up to the present hour signified their desire to build are Hyderabad, Baroda, Mysore, Bhopal, Gwalior, Kashmir, Kalat, Travancore, Bahawalpur, Bharatpur, Bikaner, Bundi, Kotah, Cutch, Jodhpur, Patiala, Tonk, Alwar, Datia, Dhar, Dholpur, Jaisalmer, Kishangarh, Orchha, Partabgarh, Sirahi, Faridkhot, Jind, Kapurthala, Nabha, Sailana, Malerkotla and Narsingarh.

Ethnological Museum.—A temporary building has been erected in which Sir Aurlve Stein will house some of his Central Asian Antiquities. Work on certain frescoes will probably start shortly and the collection will ultimately be placed in the proposed Museum.

The Agra-Delhi Railway Diversion.—As has been already stated, this railway which at present runs across the site of the new city, is to be diverted to a new alignment running East of Humayun's Tomb and Indrapat. It is expected that this work will start very shortly. Amongst other matters which are now receiving attention are the designs for the residences of the Commander in Chief and the Hon. ble members, the afforestation of the Ridge to the west of the new city, the designs for the Imperial Record Office, and the naming of the roads.

Sanitary Improvements.—While the work on the new city has been going forward various improvements in the existing Delhi have been carried out and the sanitary conditions in particular have been much improved. The fly nuisance which was extremely bad in Delhi has been much reduced, and other schemes have been formulated as the result of a sanitary survey which embraced the whole of the city. The most tangible results of these efforts is seen in the consistent fall in the death-rate, and the acknowledged reduction in the amount of sickness in Delhi.

Higher College for Chiefs.—It was proposed during 1914 that a higher college for Chiefs should be established at Delhi and in this connexion a conference of Chiefs and Political Officers was held at Delhi, in March, at which the Viceroy presided. It was subsequently announced that subscriptions offered towards the college amounted to about ten and a half lakhs, various recurring sums were promised, and the Government of India also promised to recommend the Secretary of State a grant of Rs. 50,000 a year. Thus the whole capital would come to 12½ lakhs. The proposal is still under consideration.

Indian Official Reports.

(MOSTLY ANNUAL.)

General.—

Statistical Abstract relating to British India (Parliamentary Paper).

Statistics of British India :—

Vol. I.—Commercial.

Vol. II.—Financial.

Vol. III.—Public Health.

Vol. IV.—Administrative and Judicial.

Vol. V.—Educational.

Census Reports (Decennial), India, Provincial and Native States.

Administration Reports : Madras, Bombay, Coorg, United Provinces, Punjab, Bengal, Central Provinces and Berar, Burma, Bihar and Orissa, Assam, Andaman and Nicobar Islands, Civil and Military Station of Bangalore, Ajmer-Merwara, Baluchistan Agency, North-West Frontier Province, Delhi.

Legislation.—

Acts of the Imperial and Provincial Legislative Councils.

Justice and Police.—

Report on the Administration of Civil Justice for each Province.

Report on the Administration of Criminal Justice for each Province.

Report on Jails for each Province.

Reports on Police, for each Province, and for Bombay Town and Island, Calcutta, and Rangoon.

Finance.—

Finance and Revenue Accounts of the Government of India.

East India Financial Statement (Parliamentary Paper).

Return of Net Income and Expenditure for eleven years (Parliamentary Paper).

Accounts and Estimates : Explanatory Memorandum (Parliamentary Paper).

Home Accounts (Parliamentary Paper).

Loans raised in England (Half-yearly Parliamentary Paper).

Loans raised in India (Half-yearly Parliamentary Paper).

Mint Reports for Calcutta and Bombay.

Paper Currency Department Reports, India and Bombay.

Statistics compiled from the Finance and Revenue Accounts.

Statistical Tables relating to Banks in India with a Map, Introductory Memorandum and Banking Directory.

Land Revenue, &c.—

Land Revenue Administration Provincial Reports for Lower Provinces (Bengal), Bihar and Orissa, Assam, United Provinces, Bombay Presidency (including Sind), Punjab, Central Provinces and Berar, Burma, and Madras.

Report on Land Revenue Administration, Land Records, Settlement Operations, Alienation of Land Act, &c., for North-West Frontier Province.

Madras Survey, Settlement and Land Records Department Report.

Reports of Land Records Departments for Bombay, Burma, Bengal, United Provinces, and Punjab.

Report on Settlement Operations, Punjab.

Reports on Survey and Settlement Operations, Bengal, Bihar and Orissa, and Assam.

Reports on Operations of the Land Records and Settlement Departments, Central Provinces and Berar.

Report of the Talukdari Settlement Officer, Bombay.

Provincial Reports on the Administration of Estates under the Court of Wards.

Report on the Punjab Canal Colonies.

Separate Revenue (Salt, Excise, &c.)—

Salt Department Reports : Northern India, Madras, Bombay, Sind, Bengal, Burma Bihar and Orissa.

Excise Report for each Province.

Report on the operations of the Opium Department.

Stamp Department Report for each Province.

Registration Department Report for each Province.

Income Tax Report for each Province.

Agricultural and Veterinary.—

Report on the Progress of Agriculture in India. Report on the Agricultural Research Institute and College, Pusa.

Bulletins of the Agricultural Research Institute, Pusa, and of the Provincial Departments of Agriculture.

Memoirs of the Department of Agriculture.

Proceedings of the Board of Agriculture.

Agricultural Journal of India (quarterly).

Reports of the Department of Agriculture in each Province.

Reports on Agricultural Stations, Experimental Farms, and Botanic Gardens for each Province.

Season and Crop Report for each Province.

Agricultural Statistics of India.

Area and Yield of certain Principal Crops.

Report on Production of Tea in India.

Report on Tea Culture in Assam.

Statistics compiled from the Reports of the Provincial Civil Veterinary Departments.

Report of the Camel Specialist.

Report of the Imperial Bacteriologist (Veterinary).

Reports of the Civil Veterinary Departments for Madras, Bombay, United Provinces, Punjab, Bengal, Burma, Assam, North-West Frontier Province, and Bihar and Orissa.

Co-operative Societies.—

Statements showing Progress of the Co-operative Movement in India.

Report on Co-operative Credit Societies for each Province.

Reports of Conference of Registrars of Co-operative Credit Societies, India and Provincial.

Forests.—

- Review of Forest Administration in British India.
- Report on Forest Administration for each Province.
- Reports of the Forest Research Institute and the Imperial Forest College, Dehra Dun.
- Quinquennial Forest Review
- Indian Forest Memoirs.
- Indian Forest Records.
- Forest Bulletins.

Mineral Production and Mines.—

- Review of Mineral Production (in Records of Geological Survey).
- Report on Production of Coal in India.
- Report of the Chief Inspector of Mines.

Trade and Manufactures.—

- Annual Statements of Sea-borne Trade and Navigation, India and Provincial (Madras, Bombay, Sind, Bengal, Bihar and Orissa, Burma).
- Review of the Trade of India (Parliamentary Paper).
- Tables of the Trade of India (Parliamentary Paper).
- Provincial Reports on Maritime Trade and Customs (including working of Merchandise Marks Act) for Bengal, Bihar and Orissa, Bombay, Sind, Madras, and Burma.
- Accounts of Sea-borne Trade (monthly and for Calendar Year).
- Accounts of Land Trade (monthly).
- Statistics of Cotton Spinning and Weaving in Indian Mills (monthly).
- Annual Statement of Coasting Trade of British India.
- Report on the Trade and Navigation of Aden.
- Accounts of Trade carried by Rail and River in India.
- Report on Inland, Rail-borne, or Rail-and-River-borne Trade for each Province.
- External Land Trade Reports for Bengal, Bihar and Orissa, Assam, Burma, United Provinces, Punjab, North-West* Frontier Province, Sind, and British Baluchistan.
- Indian Trade Journal (weekly).
- Statistics relating to Joint-Stock Companies in British India and Mysore (Annual and Monthly).
- Reports on the working of the Indian Companies Act (Provincial).
- Report on the working of the Indian Factories Act for each Province.
- Report of the Chief Inspector of Explosives.
- Cotton Pressing Factories and Cotton Spinning Mills in India.
- Large Industrial Establishments in India.

Public Works.—

- Administration Report on Railways.
- Reports on Public Works (Buildings and Roads), for Madras, Bombay, Punjab, North-West Frontier Province, and Burma.
- Review of Irrigation.
- Report on Irrigation Revenue for each Province (except Madras).
- Administrative Reports on Irrigation, Madras and Bombay.

Report on Architectural Work in India.

Post Office and Telegraphs.—

- Reports on the Posts & Telegraphs of India.
- Report of Indo-European Telegraph Department.

Scientific Departments.—

- Report of the Operations of the Survey of India.
- Records of the Survey of India.
- Records and Memoirs of the Geological Survey of India.
- Report of the Indian Meteorological Department.
- Indian Weather Review, Annual Summary.
- Rainfall of India.
- Memoirs of the Indian Meteorological Department.
- Report of the Meteorologist, Calcutta.
- Report of the Director-General of Observatories.
- Memoirs and Bulletins of the Kodaikanal Observatory.
- Report of the Board of Scientific Advice.
- Report of the Archaeological Survey of India, and Provincial Reports.
- Report and Records of the Botanical Survey.

Education, Literature, and the Press.—

- Education Reports for India and each Province.
- Quinquennial Review of Education (Parliamentary Paper).

Local Self-Government.—

- Reports on Municipalities for each Province and for Calcutta, Bombay City, Madras City, and Rangoon.
- Report on District and Local Boards or Local Funds for each Province.
- Reports of Port Trusts of Calcutta, Bombay, Madras, Rangoon, Karachi, and Aden.

Medical, Sanitary, and Vital Statistics.—

- Report of the Sanitary Commissioner with the Government of India.
- Report on Sanitary Measures in India (Parliamentary Paper).
- Report of the Sanitary Commissioner for each Province.
- Vaccination Report for each Province.
- Report on Civil Hospitals and Dispensaries for each Province.
- Report on Lunatic Asylums for each Province.
- Report of the Chemical Examiner and Bacteriologist for each Province.
- Scientific Memoirs by Officers of the Medical and Sanitary Departments.
- Reports of the All-India Sanitary Conferences.
- Reports of the Imperial Malaria Conferences.
- Indian Journal of Medical Research (Quarterly).

Emigration and Immigration.—

- Calcutta Port Emigration Report.
- Bengal Inland Emigration Report.
- Assam Immigration Report.

Prices and Wages.—

- Prices and Wages in India.
- Variations in Indian Price Levels.
- Reports of Provincial Wage Censuses.

Customs Tariff.

The customs revenue is mainly derived from the general import duty, certain special import duties such as those on arms, liquors, sugar, petroleum and tobacco, and an export duty on rice. General import duties, which were abolished in 1882, were reimposed in 1894, since which date the general rate of duty on commodities imported into British India by sea has been 5 per cent. *ad valorem*. Cotton was exempted in 1894 when the general duties were received; in December 1894 a 5 per cent. duty *ad valorem* was imposed on imported cotton goods and yarns, while an excise duty of 5 per cent. was imposed on all yarns of counts above 20 spun at power mills in British India; in February 1896 cotton yarns and threads imported or manufactured in India were freed from duty, while a uniform $3\frac{1}{2}$ per cent. *ad valorem* duty was imposed on all woven cotton goods imported or manufactured in India at power mills. The products of hand looms are exempted. The gross revenue from imports, salt excluded, in 1915-16, was Rs. 7,35,31,000. The estimated gross revenue from this source for 1916-17 is Rs. 8,89,20,000.

The Chief alterations in the tariff, which came into force on March 1, 1916, are as follows:—

Goods which before have been dutiable at the rate of 5 per cent. now pay $7\frac{1}{2}$ per cent. *ad valorem*. Machinery, which (with the exception of cartridge-making machinery and machines worked by animal or manual labour) was formerly free, is subject to a duty of $2\frac{1}{2}$ per cent. *ad valorem*, but machinery for cotton spinning and weaving mills remains duty free, as do cotton yarn and thread. Cotton manufactures remain dutiable as before at the rate of $3\frac{1}{2}$ per cent. *ad valorem*. Railway material and ships are to pay $2\frac{1}{2}$ per cent., and coal a specific duty of 8 annas per ton. Iron and steel in bars, plates, sheets, and other manufactured forms, formerly dutiable at 1 per cent. are now to pay $2\frac{1}{2}$ per cent. The rates for silver and petroleum remain as before, but silver plate and silver thread are to pay 15 per cent. The sugar duty is raised from 5 to 10 per cent., and considerable increases have also been made in the rates leviable on alcoholic liquors and tobacco. In addition export duties have been placed on tea and jute.

Schedule II—(Import Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
I.—Food, Drink and Tobacco.				
FISH.				
1	FISH, SALTED, wet or dry	Indian maund of 82½ lbs. avoirdupois weight.	....	Such rate or rates of duty not exceeding twelve annas as the Governor-General in Council may, by notification in the <i>Gazette of India</i> , from time to time prescribe.
2	FISHMAWS, including singally and sozille, and sharkfins.	....	<i>Ad valorem</i>	$7\frac{1}{2}$ per cent.
3	FISH, excluding salted fish (see No. 1) .. ..	....	"	$7\frac{1}{2}$ " "
FRUITS AND VEGETABLES.				
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved—			
	Almonds without shell	cwt.	100 0	$7\frac{1}{2}$ per cent.
	" in the shell	"	30 0	$7\frac{1}{2}$ " "
	" kàgazi .. { Persian	"	100 0	$7\frac{1}{2}$ " "
	" .. { European, including half-hard round almonds.	"	60 0	$7\frac{1}{2}$ " "
	Cashew or cajoo kernels	"	26 0	$7\frac{1}{2}$ " "
	Cocoanuts, Straits and Dutch East Indies ..	thousand.	90 0	$7\frac{1}{2}$ " "
	" Maldives	"	36 0	$7\frac{1}{2}$ " "
	" other	"	60 0	$7\frac{1}{2}$ " "
	" kernel (khopra)	cwt.	20 0	$7\frac{1}{2}$ " "

Schedule II—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
I.—Food, Drink and Tobacco—contd.				
FRUITS AND VEGETABLES—contd.			Rs. a.	
4	FRUITS AND VEGETABLES, all sorts, fresh, dried, salted or preserved— <i>contd.</i>			
	Currants	cwt.	56 0	7½ per cent.
	Dates, dry, in bags	"	12 0	7½ " "
	" wet, in bags, baskets and bundles	"	8 0	7½ " "
	" " in pots, boxes, tins and crates	"	14 0	7½ " "
	Figs, Persian, dried	"	20 0	7½ " "
	Garlic	"	7 0	7½ " "
	Pistachio nuts	"	120 0	7½ " "
	Raisins, Munukka, Persian Gulf .. .. .	....	21 0	7½ " "
	" other sorts .. .. .	....	<i>Ad valorem</i>	7½ " "
	All other sorts of fruits and vegetables, fresh, dried, salted or preserved.	....	"	7½ " "
GRAIN, PULSE AND FLOUR.				
5	GRAIN AND PULSE, all sorts, including broken grain and pulse, but excluding flour (see No. 6).	....	"	2½ " "
6	FLOUR .. .. .	....	"	7½ " "
LIQUORS.				Rs. a. p.
7	ALE, Beer, and Porter	Imperial gallon or 6 quart bottles	....	0 4 6
8	CIDER and other fermented liquors .. .. .	"	....	0 4 6
9	LIQUEURS, Cordials, Mixtures and other preparations containing spirit—			
	(a) Entered in such a manner as to indicate that the strength is not to be tested.	"	....	14 10 0
	(b) If tested	Imperial gallon or 6 quart bottles of the strength of London proof.	....	11 4 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
10	PERFUMED SPIRITS	Imperial gallon or 6 quart bottles.	....	18 12 0
11	SPIRIT, which has been rendered effectually and permanently unfit for human consumption.	....	<i>Ad valorem</i>	7½ per cent.

Schedule II—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
I.—Food, Drink and Tobacco—contd.				
LIQUORS—contd.				
			Rs. a p.	Rs. a p.
12	All other sorts of SPIRIT	Imperial gallon or 6 quart bottles of the strength of London proof.	....	11 4 0 and the duty to be increased or reduced in proportion as the strength of the spirit exceeds or is less than London proof.
13	WINES—			
	Champagne and all other sparkling wines not containing more than 42 per cent. of proof spirit.	Imperial gallon or 6 quart bottles.	....	4 6 0
	All other sorts of wines not containing more than 42 per cent. of proof spirit.	„	....	1 12 0
	Provided that all sparkling and still wines containing more than 42 per cent. of proof spirit shall be liable to duty at the rate applicable to “All other sorts of Spirit.”			
PROVISIONS AND OILMAN'S STORES.				
14	VINEGAR, in casks .. .. .	....	Ad valorem	2½ per cent.
15	PROVISIONS, OILMAN'S STORES, AND GROCERIES, all sorts, excluding vinegar in casks (see No. 14)—			
	Butter	lb.	2 2	7½ „ „
	Cassava, Tapioca or Sago whole or flour ..	cwt.	18 8	7½ „ „
	China preserves in syrup	Box of 6 large or 12 small jars.	9 8	7½ „ „
	„ „ dry, candied	lb.	0 8	7½ „ „
	Cocum	cwt.	9 0	7½ „ „
	Ghi	„	105 0	7½ „ „
	Vinegar not in casks .. .. .	....	Ad valorem	7½ „ „
	All other sorts of provisions, oilman's stores, and groceries.	....	„	7½ „ „

Schedule II—(Import Tariff)—continued.

No.	Name of Articles.	Per	Tariff Valuation.	Duty.
I.—Food, Drink and Tobacco—contd.				
SPICES.				
16	SPICES, all sorts—		Rs. a.	
	Betelnuts, raw, whole, split, or sliced, also red whole from Goa.	cwt.	13 8	7½ per cent.
	„ „ „ „ „ „ Straits	„	13 8	7½ „ „
	„ „ „ „ „ „ boiled.	„	18 0	7½ „ „
	„ whole, from Ceylon	„	13 8	7½ „ „
	„ raw, split (sun-dried), from Ceylon	„	30 0	7½ „ „
	„ all other sorts .. .. .	....	<i>Ad valorem</i>	7½ „ „
	Chillies, dry.. .. .	cwt.	25 0	7½ „ „
	Cloves	„	66 0	7½ „ „
	„ exhausted.. .. .	„	22 0	7½ „ „
	„ stems and heads	„	7 0	7½ „ „
	„ in seeds, narlavang	„	20 0	7½ „ „
	Ginger, dry.. .. .	„	30 0	7½ „ „
	Mace	lb.	0 14	7½ „ „
	Nutmegs	„	0 8	7½ „ „
	„ in shell	„	0 4	7½ „ „
	Pepper, black	cwt.	46 0	7½ „ „
	„ white	„	75 0	7½ „ „
	All other sorts of spices .. .. .	....	<i>Ad valorem</i>	7½ „ „
SUGAR.				
17	CONFECTIONERY .. .. .	....	„ „	7½ „ „
18	SUGAR, all sorts, including Molasses and Saccharine produce of all sorts, but excluding confectionery (see No. 17)—			
	Sugar, crystallised and soft, from Java, 23, Dutch standard and above.	cwt.	18 8	10 „ „
	„ „ from Java or Japan, 16 to 22 Dutch standard.	„	16 8	10 „ „
	„ „ from Java 15 Dutch standard and under.	„	16 0	10 „ „
	„ „ and soft, from Japan or Formosa.	„	20 8	10 „ „
	„ „ refined in China	„	20 8	10 „ „
	„ „ „ „ from Egypt	„	19 8	10 „ „
	„ „ from Mauritius	„	17 0	10 „ „
	„ „ beet.. .. .	„	18 8	10 „ „
	Molasses from Java	„	6 6	10 „ „
	„ „ other countries	„	6 6	10 „ „
	Sugar, all other sorts, including saccharine produce of all kinds.	....	<i>Ad valorem</i>	10 „ „
TEA.				
19	TEA—			
	Tea, black	lb.	0 12	7½ „ „
	„ green	„	0 14	7½ „ „

Schedule II—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
I.—Food, Drink and Tobacco—<i>contd.</i>				
OTHER FOOD AND DRINK.				
20	COFFEE.. .. .	cwt.	Rs. a. 45 0	7½ per cent.
21	HOPS .. .. .	....	....	Free.
22	SALT	Indian maund of 82½ lbs. avoirdupois weight.	....	The rate at which excise duty is for the time be- ing leviable on salt manu- factured in the place where the import takes place.
23	SALT imported into British India and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in any process of manufacture ; also salt imported into the port of Calcutta and issued with the sanction of the Government of Bengal to manufacturers of glazed stoneware ; also salt imported into any port in the provinces of Bengal and Bihar and Orissa and issued, in accordance with rules made with the previous sanction of the Governor-General in Council, for use in curing fish in those provinces.	....	....	Free.
24	ALL OTHER SORTS OF FOOD AND DRINK not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
TOBACCO.				
25	TOBACCO, unmanufactured	lb.	....	1 0 0
26	CIGARS AND CIGARETTES .. .. .	....	<i>Ad valorem</i>	50 per cent.
27	All other sorts of TOBACCO, manufactured.. ..	lb.	....	1 8 0
II.—Raw Materials and produce and articles mainly unmanufactured.				
COAL, ETC.				
28	COAL, COKE AND PATENT FUEL	Ton.	....	0 8 0
GUMS, RESINS AND LAC.				
29	GUMS, RESINS AND LAC, all sorts—			
	Gambier, block	cwt.	27 8	7½ per cent.
	Cube	"	40 0	7½ " "
	Other Sorts	"	<i>Ad valorem</i>	7½ " "
	Gamboge	"	2 0	7½ " "
	Gum Ammoniac	"	30 0	7½ " "
	" Arabic	"	30 0	7½ " "
	" Benjamin, ras	"	33 0	7½ " "

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff valuation.	Duty.
II.—Raw Materials and produce and articles mainly unmanufactured <i>—contd.</i>			Rs. a.	Rs. a. p.
29	GUMS, RESINS AND LAC, all sorts— <i>contd.</i>			
	Gum: Benjamin, cowrie.. .. .	cwt.	70 0	7½ per cent.
	„ Bysabol (coarse myrrh)	„	70 0	7½ „ „
	„ Olibanum of frankincense	„	13 0	7½ „ „
	„ Persian (false)	cwt.	18 0	7½ „ „
	Myrrh	„	70 0	7½ „ „
	Rosin	„	28 0	7½ „ „
	All other sorts of gums, gum-resins, and articles made of gum or gum-resin.	....	<i>Ad valorem</i>	7½ „ „
HIDES AND SKINS, RAW.				
30	HIDES AND SKINS, raw or salted.. .. .	....	....	Free.
METALLIC ORES, AND SCRAP IRON OR STEEL FOR RE-MANUFACTURE.				
31	IRON OR STEEL, old.. .. .	cwt.	3 8	2½ per cent.
32	METALLIC ORES, all sorts .. .. .	....	<i>Ad valorem</i>	7½ „ „
OILS.				
33	PETROLEUM, including also naptha and the liquids commonly known by the names of rock-oil, Rangoon-oil, Burma oil, kerosine, paraffin oil, mineral oil, petroline, gasoline, benzol, benzoline, benzine, and any inflammable liquid which is made from petroleum, coal, schist, shale, peat or any other bituminous substance, or from any products of petroleum, but excluding the following classes or petroleum.	Imperial gallon.	....	0 1 6
	Petroleum which has its flashing point at or above two hundred degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively for the batching of jute or other fibre, or for lubricating purposes.	....	<i>Ad valorem</i>	7½ per cent.
	Petroleum which has its flashing point at or above one hundred and fifty degrees of Fahrenheit's thermometer and is proved to the satisfaction of the Collector of Customs to be intended for use exclusively as fuel or for some sanitary or hygienic purpose.	....	„	7½ „ „
34	All other sorts of animal, essential, mineral, and vegetable non-essential OILS—			
	Cocoanut oil	cwt.	35 0	7½ „ „
	All other sorts of oil .. .. .	....	<i>Ad valorem</i>	7½ „ „

Schedule II.—(Import Tariff).—continued

No.	Names of Articles.	Per	Tariff Valuation	Duty.
II.—Raw materials and produce and articles mainly unmanufactured—contd.				
SEEDS.			Rs. a.	
35	OIL-SEEDS, imported into British India by sea from the territories of any Native Prince or Chief in India.	....	....	Free.
36	SEEDS, all sorts, excluding oil-seeds specified in No. 35	....	<i>Ad valorem</i>	7½ per cent.
TALLOW, STEARINE AND WAX.				
37	TALLOW AND STEARINE, including grease and animal fat, and WAX of all sorts, not otherwise specified.	....	"	7½ " "
TEXTILE MATERIALS.				
38	COTTON, raw .. .. .	....	....	Free.
39	WOOL, raw .. .. .	....	....	"
40	TEXTILE MATERIALS, the following:—			
	Silk waste and raw silk including cocoons—			
	Bokhara	lb.	7 8	7½ per cent.
	Floss .. .. .	....	<i>Ad valorem</i>	7½ " "
	Raw silk—Yellow Shanghai, including re-reeled.	lb.	6 8	7½ " "
	Yellow from Indo-China, and places in China other than Shanghai including re-reeled.	"	8 0	7½ " "
	Mathow	"	4 12	7½ " "
	Panjam	"	3 12	7½ " "
	Persian	"	5 0	7½ " "
	Siam	"	7 0	7½ " "
	White Shanghai, Thonkoon or Dup pion.	"	4 8	7½ " "
	" " other kinds including re-reeled.	"	7 8	7½ " "
	" " other kinds of China, including re-reeled.	"	9 0	7½ " "
	Waste and Kachra .. .. .	....	<i>Ad valorem</i>	7½ " "
	All other sorts, including cocoons .. .. .	....	"	7½ " "
	Raw Flax, Hemp, Jute and all other unmanufactured textile materials not otherwise specified.	....	"	7½ " "
WOOD AND TIMBER.				
41	FIREWOOD .. .. .	....	"	2½ " "
42	WOOD AND TIMBER, all sorts, not otherwise specified, including all sorts of ornamental wood.	....	"	7½ " "

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
II.—Raw materials and produce and articles mainly unmanufactured—<i>contd.</i>				
MISCELLANEOUS.			Rs. a.	
43	CANES AND RATTANS .. .. .	....	<i>Ad valorem</i>	7½ per cent.
44	COWRIES AND SHELLS, including Tortoise-shell—			
	Cowries, bazar, common	cwt.	6 0	7½ „ „
	„ yellow, superior quality	„	7 0	7½ „ „
	„ Maldiva	„	10 0	7½ „ „
	„ Sankhli	„	115 0	7½ „ „
	Mother-of-pearl, nacre .. .. .	....	27 0	7½ „ „
	Nakhla	cwt.	175 0	7½ „ „
	Tortoise-shell	lb.	14 0	7½ „ „
	„ nakh	„	5 0	7½ „ „
	All other sorts, including articles made of shell, not otherwise described.	....	<i>Ad valorem</i>	7½ „ „
45	IVORY, unmanufactured—			
	Elephant's grinders	cwt.	300 0	7½ „ „
	„ tusks (other than hollows, centres, and points), each exceeding 20 lb. in weight, and hollows, centres, and points each weighing 10 lb. and over.	„	900 0	7½ „ „
	Elephants' tusks (other than hollows, centres and points), not less than 10 lb. and not exceeding 20 lb. each, and hollows, centres, and points each weighing less than 10 lb.	„	725 0	7½ „ „
	Elephants' tusks, each less than 10 lb. (other than hollows, centres, and points).	„	400 0	7½ „ „
	Sea-cow or moye teeth, each not less than 4 lb..	„	200 0	7½ „ „
	Sea-cow or moye teeth, each not less than 3 lb. and under 4 lb.	„	170 0	7½ „ „
	Sea-cow or moye teeth, each less than 3 lb. ..	„	135 0	7½ „ „
	All other sorts unmanufactured not otherwise specified.	„	<i>Ad valorem</i>	7½ „ „
46	MANURES, all sorts, including animal bones and the following chemical manures:—Basic slag, nitrate of soda, muriate of potash, sulphate of potash, kainit salts, nitrate of lime, calcium cyanamide and mineral superphosphates.	....	....	Free.
47	PRECIOUS STONES AND PEARLS, unset *	<i>Ad valorem</i>	7½ per cent.
48	PULP OF WOOD, RAGS and other paper-making materials.	....	....	Free.
49	ALL OTHER RAW MATERIALS, and produce and articles mainly unmanufactured, not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.

* Pearls unset have been exempted by executive order from payment of duty.

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured.				
APPAREL.				
50	APPAREL, including drapery, boots and shoes, and military and other uniforms and accoutrements, but excluding uniforms and accoutrements exempted from duty (No. 51) and silver thread (No. 90).	....	<i>Ad valorem</i>	7½ per cent.
51	UNIFORMS AND ACCOUTREMENTS appertaining thereto, imported by a public servant for his personal use.	....	....	Free.
ARMS, AMMUNITION AND MILITARY STORES.				
52	Subject to the exemptions specified in No. 55, ARMS, AMMUNITION AND MILITARY STORES, that is to say,—			Rs. a.
	(1) Firearms other than pistols, including gas and air guns and rifles.	Each.	....	50 0
	(2) Barrels for the same, whether single or double.	"	....	30 0
	(3) Pistols .. .. .	"	....	15 0
	(4) Barrels for the same, whether single or double.	"	....	10 0
	(5) Main springs and magazine springs for firearms, including gas, guns and rifles.	"	....	8 0
	(6) Gun stocks and breech blocks .. ..	"	....	5 0
	(7) Revolver cylinders, for each cartridge they will carry.	"	....	2 8
	(8) Actions (including skeleton and waster), breech bolts and their heads, cocking pieces, and locks (for muzzle-loading arms).	"	....	1 8
	(9) Machines for making loading or closing cartridges for rifled arms.	"	....	10 0
	(10) Machines for capping cartridges for rifled arms.	"	....	2 8
<p><i>Proviso 1.</i>—No duty in excess of 20 per cent. <i>ad valorem</i> shall be levied upon any of the articles specified in items Nos. 1 to 10 of this entry when they are imported in reasonable quantity, for his own private use, by any person lawfully entitled to possess the same.</p> <p><i>Proviso 2.</i>—When any articles which have been otherwise imported and upon which duty has been levied or is leviable under items Nos. 1 to 10, are purchased retail from the importer by a person lawfully entitled as aforesaid, in reasonable quantity for his own private use, the importer may apply to the Collector of Customs for refund or remission (as the case may be) of so much of the duty thereon as is in excess of 20 per cent. <i>ad valorem</i>; and if such Collector is satisfied as to the identity of the articles and that such importer is in other respects entitled to such refund or remission, he shall grant the same accordingly.</p>				} or 20 per cent. <i>ad valorem</i> whichever is higher.

Schedule II.—(Import Tariff)—*continued*.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
<p>III.—Articles wholly or mainly manufactured—<i>contd.</i></p> <p>ARMS, AMMUNITION AND MILITARY STORES—<i>contd.</i></p>				
53	GUNPOWDER for cannons, rifles, guns, pistols and sporting purposes.	....	<i>Ad valorem</i>	20 per cent.
54	Subject to the exemptions specified in No. 55 all ARTICLES, other than those specified in entry No. 52, which are ARMS OR PARTS OF ARMS within the meaning of the Indian Arms Act, (excluding springs used for air-guns which are dutiable as hardware, under No. 68), all tools used for cleaning or putting together the same, all machines for making, loading, closing or capping cartridges for arms other than rifled arms and all other sorts of ammunition and military stores, and any articles which the Governor General in Council may by notification in the <i>Gazette of India</i> declare to be "ammunition" or "military stores" for the purposes of this Act.	....	"	20 " "
55	<p>The following classes of ARMS, AMMUNITION AND MILITARY STORES:—</p> <p>(a) Articles falling under the 5th, 6th, 8th, 9th or 10th item of No. 52 when they appertain to a firearm falling under the 1st or 3rd item and are fitted into the same case with such firearm ;</p> <p>(b) Arms forming part of the regular equipment of an officer entitled to wear diplomatic, military, naval or police uniform ;</p> <p>(c) A sword, a revolver, or a pair of pistols, when accompanying an officer of his Majesty's regular forces, or a commissioned officer of a volunteer corps, or certified by the commandant of the corps to which such officer belongs, or, in the case of an officer not attached to any corps, by the officer commanding the station or district in which such officer is serving, to be imported by the officer for the purpose of his equipment ;</p> <p>(d) Swords and revolvers which are certified by an Inspector-General of Police to be part of the ordinary equipment of members of the Police force under his charge ;</p> <p>(e) Swords forming part of the equipment of Indian commissioned officers of His Majesty's army ;</p>	....	....	Free.

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—contd.				
	ARMS, AMMUNITION AND MILITARY STORES—contd.		Rs. a.	Rs. a. p.
55	ARMS, AMMUNITION AND MILITARY STORES—contd.			
	(f) Swords for presentation as army or volunteer prizes;			
	(g) Arms, ammunition and military stores imported with the sanction of the Government of India for the use of any portion of the military forces of a Native State in India which may be maintained and organized for Imperial Service;			
	(h) Morris tubes and patent ammunition imported by officers commanding British and Indian regiments or volunteer corps for the instruction of their men			
56	EXPLOSIVES, namely, blasting gunpowder, blasting gelatine, blasting dynamite, blasting roburite, blasting tonite, and all other sorts, including detonators and blasting fuse.	....	Ad valorem	7½ per cent.
	CARRIAGES AND CARTS.			
57	CARRIAGES AND CARTS including motor-cars, motor-cycles and motor-wagons, bicycles, tricycles, jinrikshas, bath chairs, perambulators, trucks, wheel-barrows, and all other sorts of conveyances and component parts thereof.	....	"	7½ " "
	CHEMICALS, DRUGS AND MEDICINES.			
58	ANTI-PLAGUE SERUM .. .. .	....	....	Free.
59	COPPERAS, green .. .. .	....	Ad valorem	2½ per cent.
60	OPIUM and its alkaloids	Seer of 8 tolas.	....	24 0 0
61	QUININE and other alkaloids of cinchona .. .. .	....	....	Free.
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—			
	Alkali, Indian (saji-khar)	cwt.	4 0	7½ per cent.
	Alum	"	12 0	7½ " "
	Arsenic (China mansil)	"	36 0	7½ " "
	" other sorts .. .. .	....	Ad valorem	7½ " "
	Soda ash and crescent alkali.. .. .	cwt.	6 0	7½ " "
	Soda Bicarbonate	"	9 8	7½ " "
	Soda Magadi	"	5 0	7½ " "
	Sulphate of Copper	"	30 0	7½ " "
	Sulphur (brimstone), flowers	"	13 0	7½ " "
	" " roll	"	13 0	7½ " "
	" " rough .. .. .	....	Ad valorem	7½ " "

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—contd.				
CHEMICALS, DRUGS AND MEDICINES				
—contd.				
62	CHEMICALS, DRUGS AND MEDICINES, all sorts, not otherwise specified—contd.		Rs. a.	
	All other sorts of chemical products and preparations not otherwise specified ..	....	<i>Ad valorem</i>	7½ per cent.
	Aloe-wood .. .. .	....	7½ "	" "
	Asafoetida (hing)	cwt.	125 0	7½ "
	" coarse (hingra)	"	42 0	7½ "
	Atary, Persian .. .. .	....	<i>Ad valorem</i>	7½ "
	Banslochan (bamboo camphor)	lb.	0 9	7½ "
	Calumba root	cwt.	25 0	7½ "
	Camphor, refined, other than powder ..	lb.	5 8	7½ "
	Cassia lignea	cwt.	37 0	7½ "
	China root (chobchini), rough	"	15 0	7½ "
	" " " scraped	"	28 0	7½ "
	Cubebs	cwt.	175 0	7½ "
	Galangal, China	"	19 0	7½ "
	Pellitory (akalkara) .. .. .	....	<i>Ad valorem</i>	7½ "
	Peppermint, crystals .. .. .	....	7½ "	" "
	Salep	cwt.	300 0	7½ "
	Senna leaves .. .. .	....	<i>Ad valorem</i>	7½ "
	Storax, liquid (rose mellos or salaras) ..	cwt.	124 0	7½ "
	All other sorts of drugs, medicines, and narcotics.	....	<i>Ad valorem</i>	7½ "
CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS.				
63	The following AGRICULTURAL IMPLEMENTS, when constructed so that they can be worked by manual or animal power, namely, winnowers, threshers, mowing and reaping machines, elevators, seed-crushers, chaff-cutters, root-cutters, horse and bullock gears, ploughs, cultivators' scarifiers, harrows, clod-crushers, seed-drills hay tedders, and rakes.		....
64	CLOCKS AND WATCHES, and parts thereof.. ..	....	<i>Ad valorem</i>	7½ per cent.
65	CUTLERY .. .. .	....	"	7½ " "
66	The following DAIRY APPLIANCES, when constructed, so that they can be worked by manual or animal power, namely, cream separators, milk sterilizing or pasteurizing plant, milk aerating and cooling apparatus, churns, butter dryers, and butter workers.	....	....	Free.
67	ELECTROPLATED WARE .. .. .	....	<i>Ad valorem</i>	7½ per cent.
68	HARDWARE, IRONMONGERY AND TOOLS, all sorts not otherwise specified.	....	"	7½ " "

Schedule II.—(Import Tariff)—*continued*.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—<i>contd.</i>		Rs. a.	
	CUTLERY, HARDWARE, IMPLEMENTS AND INSTRUMENTS—<i>contd.</i>			
69	INSTRUMENTS, APPARATUS, AND APPLIANCES, imported by a passenger as part of his personal baggage and in actual use by him in the exercise of his profession or calling.	....	....	Free.
70	TELEGRAPHIC INSTRUMENTS AND APPARATUS, and parts thereof, imported by or under the orders of a railway company.	....	<i>Ad valorem</i>	2½ per cent.
71	WATER-LIFTS, SUGAR-MILLS, OIL-PRESSES, and parts thereof, when constructed so that they can be worked by manual or animal power.	....	....	Free.
72	All other sorts of IMPLEMENTS, INSTRUMENTS, APPARATUS AND APPLIANCES, and parts thereof, not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
	DYES AND COLOURS.			
73	DYEING AND TANNING SUBSTANCES, all sorts, and FAINTS AND COLOURS and painters' materials, all sorts—			
	Alizarine dye, dry, not exceeding 40 per cent.	lb.	4 0	7½ per cent.
	“ “ “ over 40 per cent. but not exceeding 50 per cent.	“	4 8	7½ “ “
	“ “ “ over 50 per cent. but not exceeding 60 per cent.	“	5 0	7½ “ “
	“ “ “ over 60 per cent. but not exceeding 70 per cent.	“	5 8	7½ “ “
	“ “ “ over 70 per cent. but not exceeding 80 per cent.	“	6 0	7½ “ “
	“ “ “ over 80 per cent. ..	“	7 8	7½ “ “
	“ „moist, 10 per cent.	“	0 10	7½ “ “
	“ “ „ 16 “	“	0 13	7½ “ “
	“ “ „ 20 “	“	1 0	7½ “ “
	Aniline, „moist „ exceeding 20 per cent.	“	2 0	7½ “ “
	“ „ „	“	3 0	7½ “ “
	“ dry	“	5 0	7½ “ “
	“ salts	“	<i>Ad valorem</i>	7½ “ “
	Avar bark	cwt.	7 0	7½ “ “
	Cochineal	lb.	1 2	7½ “ “
	Gallnuts (myrabolams) .. ..	....	<i>Ad valorem</i>	7½ “ “
	“ Persian	cwt.	50 0	7½ “ “
	All other sorts of dyeing and tanning materials	....	<i>Ad valorem</i>	7½ “ “
	Lead, red, dry	cwt.	37 8	7½ “ “
	“ white, dry	“	40 0	7½ “ “
	Ochre, other than European, all colours.. ..	“	2 8	7½ “ “

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—<i>contd.</i>				
DYES AND COLOURS—<i>contd.</i>				
			Rs. a.	
73	DYEING AND TANNING SUBSTANCES, all sorts and PAINTS AND COLOURS and painter's materials, all sorts— <i>contd.</i> Turpentine Vermillion, Canton Zinc, white, dry All other sorts of paints, colours and painters' materials not otherwise specified, including glue and putty.	Imperial gallon. box of 90 bundles.	7 8 325 0 <i>Ad valorem</i> " "	7½ per cent. " " " "
FURNITURE, CABINETWARE AND MANU- FACTURES OF WOOD.				
74	FURNITURE, CABINETWARE, and all manufactures of wood not otherwise specified.	....	"	7½ " "
GLASSWARE AND EARTHENWARE.				
75	GLASS AND GLASSWARE, all sorts, Chinese and Japaneseware, lacquered ware, earthenware, China and porcelain.	....	"	7½ " "
HIDES, SKINS AND LEATHER.				
76	HIDES AND SKINS not otherwise specified, LEATHER AND LEATHER MANUFACTURES, all sorts, not otherwise specified.	....	"	7½ " "
MACHINERY.				
77	MACHINERY, namely, prime-movers and compo- nent parts thereof, including boilers and compo- nent parts thereof; also including locomotive and portable engines, steam-rollers, fire-engines and other machines in which the prime-mover is not separable from the operative parts. MACHINERY (and component parts thereof), mean- ing machines or sets of machines to be worked by electric, steam, water, fire or other power not being manual or animal labour or which, before being brought into use, require to be fixed with reference to other moving parts; and including belting of all materials for driving machinery. Provided that the term does not include tools and implements to be worked by manual or animal labour and provided also that only such arti- cles shall be admitted as component parts of machinery as are indispensable for the work- ing of the machinery and are, owing to their shape or to other special quality, not adapted for any other purpose. <i>Note.</i> —This entry includes machinery and com- ponent parts thereof made of substances other than metal, but excludes the arti- cles exempted under Nos. 78, 79 and 80.	....	"	2½ " "

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—<i>contd.</i>				
	MACHINERY—<i>contd.</i>		Rs. a.	
78	MACHINERY AND COMPONENT parts thereof as defined in No. 77 imported by the owner of a cotton spinning or weaving mill and proved to the satisfaction of the Collector of Customs to be intended for use in a cotton spinning or weaving mill.	....	....	Free.
79	The following ARTICLES USED IN THE MANUFACTURE OF COTTON, namely, bobbins (warping) forks for looms, healds, heald cords, heald knitting needles, laces, lags and needles for dobbies, pickers (buffalo and others), picking bands, picking levers, picking sticks (over and under), reed pliers, reeds, shuttles (for power looms), springs for looms, strappings, and weft forks.	....	....	Free.
80	DRAWING-IN-FRAMES imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be intended for use in the weaving of cotton.	....	....	Free.
81	MACHINERY and component parts thereof, meaning machines or parts of machines to be worked by manual or animal labour.	....	<i>Ad valorem</i>	7½ per cent.
	METALS, IRON AND STEEL.			
82	IRON—			
	ANGLE—			
	Angle, T Best Yorkshire or Swedish and similar qualities.	ton	400 0	2½ „ „
	„ other than Best Yorkshire or Swedish and similar qualities.	„	250 0	2½ „ „
	„ other than Best Yorkshire or Swedish and similar qualities, if galvanized, tinned, or lead coated.	....	300 0	2½ „ „
	All other sorts .. .. .	....	<i>Ad valorem</i>	2½ „ „
	BAR, ROD AND CHANNEL, INCLUDING CHANNEL FOR CARRIAGES—			
	Bar, Best Yorkshire and similar qualities..	ton	400 0	2½ „ „
	„ Swedish and similar qualities	„	350 0	2½ „ „
	„ „ „ nail-rod, round-rod, and square under ½ inch in diameter.	„	360 0	2½ „ „
	„ Swedish and charcoal, if galvanized, tinned, or lead coated.	....	<i>Ad valorem</i>	2½ „ „
	„ other kinds	ton	250 0	2½ „ „
	„ „ „ nail-rod, round-rod and square under half inch in diameter.	„	260 0	2½ „ „
	„ „ „ if galvanized, tinned, or lead coated.	....	300 0	2½ „ „
	Channel, including channel for carriages ..	....	280 0	2½ „ „
	All other sorts .. .. .	....	<i>Ad valorem</i>	2½ „ „
	PIG .. .. .	....	„	2½ „ „
	RICE BOWLS .. .. .	....	„	2½ „ „

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—contd.				
METALS, IRON AND STEEL—contd.				
83	IRON OR STEEL—		Rs. a.	
	ANCHORS AND CABLES .. .. .	..	<i>Ad valorem</i>	2½ per cent
	BEAMS, JOISTS, pillars, girders, screw-piles, bridge work and other such descriptions of iron or steel imported exclusively for building purposes; including also ridging, guttering and continuous roofing.	..	"	2½ " "
	BOLTS and nuts, including hook bolts and nuts for roofing.	....	"	2½ " "
	HOOPS AND STRIPS—			
	Hoops, Best Yorkshire or Swedish and similar qualities.	ton	425 0	2½ " "
	" other than Best Yorkshire or Swedish, if galvanised, tinned, or lead coated.	....	375 0	2½ " "
	" other kinds	ton	350 0	2½ " "
	Strips, Best Yorkshire or Swedish and similar qualities.	"	425 0	2½ " "
	" if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	....	350 0	2½ " "
	" other kinds	ton	300 0	2½ " "
	NAILS, RIVETS AND WASHERS, ALL SORTS—			
	Iron nails, rose, wire and flat-headed.. ..	cwt.	20 0	2½ " "
	" " other kinds, including galvanised, tinned, or lead coated.	....	30 0	2½ " "
	Rivets and Washers, iron or steel .. .. .	....	15 0	2½ " "
	PIPES AND TUBES, and fittings therefor, such as bends, boots, elbows, tees, sockets, flanges and the like.	....	<i>Ad valorem</i>	2½ " "
	RAILS, CHAIRS, sleepers, bearing and fish plates, spikes (commonly known as dog spikes), switches, and crossings, other than those described in No. 94, also lever boxes, clips, and tie-bars.	....	"	2½ " "
	SHEETS AND PLATES, all sorts excluding discs and circles which are dutiable under No. 85.			
	Sheets and plates, Best Yorkshire and similar qualities.	ton	600 0	2½ " "
	" " Swedish and charcoal	"	500 0	2½ " "
	" " Swedish and charcoal if galvanised, tinned, or lead coated.	....	550 0	2½ " "
	Plates, other kinds, above ½ inch thick	ton	325 0	2½ " "
	Sheets, " " up to ½ " "	"	325 0	2½ " "
	Sheets and plate cuttings	"	250 0	2½ " "
	Sheets (other than corrugated), and plates, other kinds, if galvanised, tinned, lead coated, aluminium coated, chequered or planished.	....	400 0	2½ " "
	Sheets, corrugated, galvanised or black	ton	350 0	2½ " "
	WIRE, including fencing wire and wire rope, but excluding wire netting (which is dutiable under No. 85).	....	<i>Ad valorem</i>	2½ " "

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—contd.				
METALS IRON AND STEEL—contd.				
84	STEEL—			
	ANGLE—		Rs. a.	
	Angle, T	ton	300 0	2½ per cent.
	„ „, if galvanised, tinned, or lead coated ..	....	250 0	2½ „ „
	„ „, all other sorts .. .. .	....	<i>Ad valorem</i>	2½ „ „
	BAR, ROD, AND CHANNEL, including channel for carriages—			
	Bar (other than cast steel)	ton	350 0	2½ „ „
	„ nail-rod, round-rod, and square, other than Swedish or similar qualities, under ½ inch in diameter.	„	260 0	2½ „ „
	„ galvanised, tinned, lead coated, planished or polished.	....	300 0	2½ „ „
	„ all other sorts (other than cast steel) ..	....	250 0	2½ „ „
	Channel including channel for carriages ..	ton	280 0	2½ „ „
	CAST including spring, blistered and tub steel ..	....	<i>Ad valorem</i>	2½ „ „
	INGOTS, BLOOMS, BILLETS AND SLABS .. ..	....	„	2½ „ „
85	All sorts of IRON AND STEEL and manufactures thereof, not otherwise specified—			
	Iron or steel cans or drums, when imported containing petroleum, which is separately assessed to duty under No. 33, namely:—			
	Iron or steel cans, tinned	can	0 8	7½ „ „
	Iron or steel cans or drums, not tinned, of two gallons capacity—			
	(a) with faucet caps	can or drum	1 12	7½ „ „
	(b) ordinary	„	0 4	7½ „ „
	Iron or steel drums of four gallons capacity:—			
	(a) with faucet caps	drum	2 8	7½ „ „
	(b) ordinary	„	1 0	7½ „ „
	Iron or steel cans or drums when imported not containing petroleum.	....	<i>Ad valorem</i>	7½ „ „
	Iron or steel, all other sorts, including discs or circles and wire-netting.	....	„	7½ „ „
METALS, OTHER THAN IRON AND STEEL.				
86	CURRENT SILVER, NICKEL, BRONZE, AND COPPER COIN of the Government of India.	....	....	Free.
87	GOLD BULLION AND COIN .. .. .	....	....	„
88	LEAD, sheets, for tea-chests.. .. .	....	<i>Ad valorem</i>	2½ per cent.
89	SILVER, BULLION OR COIN, not otherwise specified (See Nos. 86 and 136).	ounce	....	Rs. a. p. 0 4 0

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty
III.—Articles wholly or mainly manufactured—contd.				
METALS, OTHER THAN IRON AND STEEL—contd.			Rs. a.	
90	SILVER PLATE, SILVER THREAD and wire and SILVER MANUFACTURES, all sorts.	....	<i>Ad valorem</i>	10 per cent.
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified—			
	Brass, patent or yellow metal sheets and sheathing, weighing, 1 lb. or above per square foot, and braziers and plates.	cwt.	90 0	7½ „ „
	„ patent or yellow metal (old)	„	45 0	7 „ „
	„ sheets, flat or in rolls, and sheathing, weighing less than 1 lb. per square foot.	....	<i>Ad valorem</i>	7½ „ „
	„ wire .. .. .	....	„	7½ „ „
	„ all other sorts .. .. .	....	„	7½ „ „
	Copper, bolt and bar, rolled .. .. .	....	„	7½ „ „
	„ braziers, sheets, plates and sheathing..	cwt.	95 0	7½ „ „
	„ sheets, planished .. .. .	....	<i>Ad valorem</i>	7½ „ „
	„ nails and composition nails .. ..	....	„	7½ „ „
	„ old	cwt.	50 0	7½ „ „
	„ pigs, tiles, ingots, cakes, bricks and slabs.	„	70 0	7½ „ „
	„ China, white, copperware	lb.	4 0	7½ „ „
	„ foil or dankpana, white, 10 or 11 in. X 4 to 5 in.	hundred leaves	5 8	7½ „ „
	„ foil or dankpana, coloured, 10 to 11 in. X 4 to 5 in.	„	6 8	7½ „ „
	„ wire, including phosphor-bronze ..	....	<i>Ad valorem</i>	7½ „ „
	„ all other sorts, unmanufactured and manufactured, except current coin of the Government of India which is free.	....	„	7½ „ „
	German silver .. .. .	....	„	7½ „ „
	Gold leaf .. .. .	....	„	7½ „ „
	Lametta .. .. .	....	„	7½ „ „
	Lead, all sorts (except sheets for tea chests) ..	....	„	7½ „ „
	Quicksilver	lb.	3 8	7½ „ „
	Shot bird	cwt.	40 0	7½ „ „
	Tin, block	„	160 0	7½ „ „
	„ foil, and other sorts .. .. .	....	<i>Ad valorem</i>	7½ „ „

Schedule II.—(Import Tariff)—*continued.*

No.	Names and Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—<i>contd.</i>				
METALS, OTHER THAN IRON AND STEEL—<i>contd.</i>				
91	ALL SORTS OF METALS OTHER THAN IRON AND STEEL, and manufactures thereof, not otherwise specified— <i>contd.</i>		Rs. a.	
	Zinc or spelter, tiles, slabs or plates ..	cwt.	40 0	7½ per cent.
	" tiles." all other sorts including boiler tiles.	....	<i>Ad valorem</i>	7½ " "
	All other sorts of metals, and manufactures thereof.		"	7½ " "
PAPER, PASTEBOARD AND STATIONERY.				
92	TRADE CATALOGUES AND ADVERTISING CIRCULARS IMPORTED BY PACKET, BOOK OR PARCEL POST.	....	....	Free.
93	PAPER AND ARTICLES MADE OF PAPER AND PAPIER MACHE, PASTEBOARD, MILLBOARD, AND CARD-BOARD all sorts, and STATIONERY including ruled or printed forms and account and manuscript books, labels, advertising circulars, sheet or card almanacs and calendars, Christmas, Easter and other cards, including cards in booklet form; including also wastepaper and old newspapers for packing; but excluding trade catalogues and advertising circulars imported by packet, book, or parcel post.	....	<i>Ad valorem</i>	7½ per cent.
RAILWAY PLANT AND ROLLING STOCK.				
91	RAILWAY MATERIAL for permanent-way and rolling stock, namely, cylinders, girders, and other material for bridges, rails, sleepers, bearing and fish-plates, fish-bolts, chairs, spikes, crossings, sleeper fastenings, switches, interlocking apparatus, brake gear, couplings and springs, signals, turn-tables, weigh-bridges, engines, tenders, carriages, wagons, traversers, trollies, trucks and component parts thereof; also the following articles when imported by or under the orders of a railway company, namely, cranes, water cranes, water tanks and standards, wire and other materials for fencing.	....	"	2½ " "
Provided that for the purpose of this entry "railway" means a line of railway subject to the provisions of the Indian Railways Act, 1890, and includes a railway constructed in a Native State under the suzerainty of His Majesty and also such tramways as the Governor-General in Council may, by notification in the <i>Gazette of India</i> , specifically include therein.				

Schedule II.—(Import Tariff)—*continued.*

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
	III.—Articles wholly or mainly manufactured—<i>contd.</i>			
	RAILWAY PLANT AND ROLLING STOCK			
	— <i>contd.</i>			
94	RAILWAY MATERIAL for permanent-way, etc. — <i>contd.</i> Provided also that only such articles shall be admitted as component parts of railway material as are indispensable for the working of railways and are, owing to their shape or to other special quality, not adapted for any other purpose.			
	YARNS AND TEXTILE FABRICS.			
95	COTTON TWIST AND YARN, and COTTON SEWING OR DARNING THREAD.	....	....	Free.
96	COTTON PIECE GOODS, thread other than sewing or darning thread, and all other manufactured cotton goods not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
97	SECOND-HAND or USED GUNNY BAGS made of jute	....	....	Free.
98	YARNS AND TEXTILE FABRICS, that is to say —			
	Flax twist and yarn and manufactures of flax	....	<i>Ad valorem</i>	7½ per cent.
	Haberdashery and millinery .. .. .	....	"	7½ " "
	Hemp manufactures .. .. .	....	"	7½ " "
	Hosiery, excluding cotton hosiery (<i>see</i> No. 95) ..	....	"	7½ " "
	Jute twist and yarn and jute manufactures, excluding second-hand or used gunny bags (<i>see</i> No. 97).	....	"	7½ " "
	Silk yarn, noils, and warps, silk thread, silk piece-goods and other manufactures of silk.	....	"	7½ " "
	Woollen yarn, knitting wool and other manufactures of wool including felt.	....	"	7½ " "
	All other sorts of yarns and textile fabrics, not otherwise specified.	....	"	7½ " "
	MISCELLANEOUS.			
99	ART, the following works of :—(1) statuary and pictures intended to be put up for the public benefit in a public place, and (2) memorials of a public character intended to be put up in a public place, including the materials used, or to be used in their construction, whether worked or not.	....	....	Free.
100	ART, works of, excluding those specified in No. 99.	....	<i>Ad valorem</i>	7½ per cent.
101	BOOKS, printed, including covers for printed books, maps, charts, and plans, proofs, music and manuscripts.	....	....	Free.
102	BRUSHES AND BROOMS .. .. .	....	<i>Ad valorem</i>	7½ per cent.
103	BUILDING AND ENGINEERING MATERIALS, including asphalt, bricks, cement, chalk and lime, clay, pipes of earthenware, tiles and all other sorts of building and engineering materials not otherwise specified.	....	"	7½ " "

Schedule II.—(Import Tariff)—continued.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—contd.				
MISCELLANEOUS—contd.			Rs. a.	
104	CANDLES .. .. .	....	<i>Ad valorem</i>	7½ per cent.
105	CORDAGE AND ROPE AND TWINE OF VEGETABLE FIBRE.	....	"	7½ " "
106	FIREWORKS .. .. .	....	"	7½ " "
107	FURNITURE, TACKLE AND APPAREL, not otherwise described, for steam, railway, rowing and other vessels.	....	"	7½ " "
108	Ivory, manufactured .. .. .	....	"	7½ " "
109	JEWELLERY AND JEWELS, including gold plate and other manufactures of gold, but excluding silver plate and other manufactures of silver (<i>see</i> No. 90).	....	"	7½ per cent.
110	MATCHES .. .. .	....	"	7½ " "
111	MATS AND MATTING .. .. .	....	"	7½ " "
112	OILCAKES .. .. .	....	"	7½ " "
113	OILCLOTH AND FLOOR CLOTH .. .. .	....	"	7½ " "
114	PACKING—ENGINE AND BOILER—all sorts, excluding packing forming a component part of any article included in No. 77 and No. 94.	....	"	7½ " "
115	PERFUMERY, excluding perfumed spirits (<i>see</i> No. 10)—			
	Gowla husked and unhusked	cwt.	140 0	7½ " "
	Kapurkachri (zedoary)	"	30 0	7½ " "
	Patch leaves (patchouli)	"	22 0	7½ " "
	Rose-flowers, dried	"	27 0	7½ " "
	Rose-water	Imperial gallon.	5 0	7½ " "
116	PITCH, TAR AND DAMMER .. .. .	....	<i>Ad valorem</i>	7½ " "
117	POLISHES AND COMPOSITIONS .. .. .	....	"	7½ " "
118	PRINTING AND LITHOGRAPHING MATERIAL, namely, presses, type, ink, brass rules, composing sticks, chases, imposing tables, and lithographic stones, stereo-blocks, roller moulds, roller frames and stocks, roller composition, standing screw and hot presses, perforating machines, gold blocking presses, stereotyping apparatus, metal furniture, paper folding machines, and paging and numbering machines, but excluding paper (<i>see</i> No. 93).	....	"	2½ " "
119	PRINTS, ENGRAVINGS AND PICTURES, including photographs and picture-cards.	....	"	7½ " "
120	RACKS for the withering of tea leaf .. .. .	....	"	2½ " "

Schedule II.—(Import Tariff)—concluded.

No.	Names of Articles.	Per	Tariff Valuation.	Duty.
III.—Articles wholly or mainly manufactured—contd.				
MISCELLANEOUS—contd.			Rs. a.	
121	RUBBER tyres for motors and motor cycles, and rubber tubes for tyres, and other manufactures of rubbers not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
122	SHIPS AND OTHER VESSELS for inland and harbour navigation, including steamers, launches, boats and barges, imported entire or in sections.	....	"	2½ " "
123	SMOKERS' REQUISITES, excluding tobacco (<i>see</i> Nos. 25 to 27).	....	"	7½ " "
124	SOAP .. .. .	....	"	7½ " "
125	STARCH AND FARINA .. .. .	....	"	7½ " "
126	STONE AND MARBLE, and articles made of stone and marble.	....	"	7½ " "
127	TEA-CHESTS of Metal or wood whether imported entire or in sections, provided that the Collector of Customs is satisfied that they are imported for the purpose of the packing of tea for transport in bulk.	....	"	2½ " "
128	TOILET REQUISITES, not otherwise specified ..	....	"	7½ " "
129	TOYS, playing cards and requisites for games and sports.	....	"	7½ " "
130	UMBRELLAS, including parasols and sunshades, and fittings therefor.	....	"	7½ " "
131	The following ARTICLES, when imported by the owner of a cotton weaving mill and proved to the satisfaction of the Collector of Customs to be INTENDED FOR USE IN THE WEAVING OF COTTON or the baling of woven cotton goods:— Aniline blue, Bisulphate of soda, China clay, Chloride of magnesium, Chloride of zinc, Dressalin, Epsom salts, Farina, Farinina, Flanneltaping, Glauber salts, Glutina, Glycerine substitutes, Heald varnish, Hoop iron, Hoop steel, Rivets for bales, Sewing needles, Sizing paste, Sizing wax, Soda ash, Starch, Velvet pulp.	....	....	Free.
132	ALL OTHER ARTICLES wholly or mainly manufactured, not otherwise specified.	....	<i>Ad valorem</i>	7½ per cent.
IV.—Miscellaneous and unclassified.				
133	ANIMALS, living, all sorts .. .. .	....	....	Free.
134	CORAL .. .. .	....	<i>Ad valorem</i>	7½ per cent.
135	FODDER, bran and pollards .. .. .	....	"	7½ " "
136	SPECIMENS illustrative of natural science, including also antique coins and medals.	....	....	Free.
137	ALL OTHER ARTICLES NOT OTHERWISE SPECIFIED, including articles imported by post.	....	<i>Ad valorem</i>	7½ per cent.

Schedule III.—(Export Tariff).

No.	Names of Articles.	Per	Tariff Valuation.	Rate of duty.
	Jute other than Bimlipatam Jute.		Rs. a. p.	Rs. a. p.
1	RAW JUTE—			
	(1) Cuttings	Bale of 400 lbs.	....	1 4 0
	(2) All other descriptions .. .. .	"	....	4 8 0
2	JUTE MANUFACTURES when not in actual use as coverings, receptacles or bindings for other goods.			
	(1) Sacking (cloth, bags, twist, yarn, rope and twine).	Ton of 2,240 lbs.	....	20 0 0
	(2) Hessians and all other descriptions of jute manufactures not otherwise specified.	"	....	32 0 0
3	RAW HIDES AND SKINS.			
	(1) Arsenicated and air dried hides—			
	(a) Cows.. .. .	lb.	0 12 6	15 per cent.
	(b) Buffaloes	"	0 8 0	"
	(2) Drysalted hides—			
	(a) Cows	"	0 10 0	"
	(b) Buffaloes	"	0 6 0	"
	(3) Wetsalted hides—			
	(a) Cows.. .. .	"	0 7 0	"
	(b) Buffaloes	"	0 4 6	"
	(4) Goatskins	Piece.	4 0 0	"
	(5) Sheepskins	"	2 0 0	"
	RICE.			
4	RICE , husked or unhusked, including rice flour, but excluding rice bran and rice dust, which are free.	Indian maund of 82½ lbs. avoirdupois weight.	....	0 3 0
	TEA.			
5	TEA	100 lbs.	....	1 8 0

Some of the effects of the war period on Indian trade and finance are shown by the figures below : the amounts are in pounds sterling except when otherwise stated.

		Total Revenue.	Customs Revenue.	Railway Revenue.	Income-Tax Receipts.	Total Expenditure.	Total Military Expenditure.	Total Surplus or Deficit.
1912-13	.. ..	86,985,300	7,197,243	17,371,789	....	83,623,410	20,953,100	+3,361,900
1913-14	.. ..	84,262,000	7,538,220	17,625,634	....	83,675,000	21,265,765	+537,000
1914-15	.. ..	80,156,000	6,347,201	15,799,149	2,036,733	85,115,000	21,809,603	-4,939,009
1915-16	.. ..	84,413,537	5,873,886	17,977,103	2,090,109	85,471,258	23,503,000	-1,188,661
1916-17	.. ..	96,834,900	8,659,182	20,981,600	3,772,967	91,017,000	26,566,757	+5,817,500
1917-18*	.. ..	110,401,000	11,127,900	23,800,000	6,075,800	102,320,000	30,384,700	+8,081,000
1918-19†	.. ..	108,347,000	10,714,400	23,900,000	6,333,200	106,151,000	30,532,700	+2,196,000

Total Exports in lakhs

of rupees.

Total Imports in lakhs

of rupees.

1913-14	.. ..	183,25	183,25
1914-15	.. ..	137,93	177,48
1915-16	.. ..	131,99	192,53
1916-17	.. ..	149,63	237,07
1917-18	.. ..	150,42	233,43
1918-19	.. ..	163,03	239,30

* Revised Estimates.

† Budget Estimates.

RED CROSS WORK.

The Joint War Committee of the Order of St. John of Jerusalem and the British Red Cross Society, Indian Branch, came into being on 2nd August 1916 and has been responsible for the provision of almost the whole of the supplies of comforts for the sick and wounded ever since. Up to the end of 1917 its own resources had to be supplemented by grants from the Home Committee but the generous response to the "OUR DAY" appeal made by all classes in India secured its financial position and for the past year it has not only been self-supporting but can regard the future without anxiety.

Their Excellencies the Viceroy, Lady Chelmsford and the Commander-in-Chief are the President, Lady President and Vice-President respectively of the Committee, the affairs of which are managed by a **General Committee** composed as follows:—

*The Hon'ble Sir Claude Hill, K.C.S.I., C.I.E., I.C.S. (Chairman).

Colonel Sir Lawless Hepper, Kt., R.E. (Vice-Chairman, Bombay).

The Hon'ble Mr. W. E. Crum, O.B.E. (Vice-Chairman, Calcutta).

*The Hon'ble Mr. W. M. Hailey, C.S.I., C.I.E. (Vice-Chairman, Delhi).

*Lady Bingley.

*Lady Reed.

*Miss Darbyshire.

*Lieut.-General T. J. O'Donnell, C.B., D.S.O.

The Hon'ble Sir William Vincent, Kt.

The Hon'ble Sir Robert Gillan, K.C.S.I.

*The Hon'ble Major-General W. R. Edwards, C.B., C.M.G., I.M.S.

The Hon'ble Sir John Wood, K.C.I.E., C.S.I., C.I.E.

The Hon'ble Sir Hamilton Grant, K.C.I.E., C.S.I.

*The Hon'ble Mr. H. Sharp, C.S.I., C.I.E.

J. L. Maffey, Esq., C.I.E., I.C.S.

*Lieut.-Colonel H. Austen Smith, C.I.E., I.M.S.

*H. R. Phelps, Esq.

*G. Rainy, Esq., C.I.E., I.C.S.

Lieut.-Col. P. S. M. Burlton, I.A.

The Revd. James Black, O.B.E., M.A.

*Lieut.-Col. H. Ross, O.B.E., I.M.S.

W. J. Litster, Esq., O.B.E. (Honorary Treasurer).

Major A. L. Davies.

E. J. Buck, Esq., C.B.E.

The Hon'ble Mr. Purshotamdas Thakurdas.

The Hon'ble Raja Sir Rampal Singh, K.C.I.E.

The Hon'ble Rai Bahadur Chaudri Lal Chand, O.B.E.

Major J. C. Coldstream, I.A. (General Secretary).

Those whose names are marked* form the Working Committee which is assisted by a Finance Sub-Committee and a Medical Sub-Committee.

In the beginning of 1918 a scheme of re-organization of Red Cross work throughout India and Burma was adopted as the result of which each Province became practically autonomous as regards its own Red Cross work. The wants of Military hospitals situated within the

boundaries of a Province became its own special care and were met by a Provincial Committee which administered Provincial Funds and organized Work Parties and other supplies. Provinces also were most generous in sending supplies of clothing and other comforts to the Bombay Depot. The General Committee thus relieved of the supervision of local work was enabled to concentrate its energies on co-ordinating Red Cross work throughout India, to take the measures necessary to avoid over-lapping, to exercise general control over the operations of the Bombay Depot and to arrange for supplies required by Commissions overseas. The result of the re-organization proved most satisfactory.

Proposed new organisation.—In 1919 proposals were circulated by the President of the Joint War Committee which may be briefly summarised as follows:—

(a) to constitute an Indian Red Cross Society on a formal basis;

(b) to organise ourselves efficiently by the formation of affiliated provincial branches;

(c) to co-ordinate on a permanent footing our relations with St. John Ambulance Association and the Bridge overseas, and

(d) to determine the scope and limitations of the activities upon which we should embark.

In the first place, said Sir Claude Hill in a note on the subject, the necessary steps must be taken for the constitution of an Indian Red-Cross Society with branches in every province, and for legalising, if necessary, the vesting in that Society of the administration of the capital sums at present to the credit of the Joint War Committee and of such other sums as may hereafter be collected and credited to it. Action is being taken by my Committee to obtain legal advice as to whether this can best be effected by legislation establishing the Indian Red Cross Society and enabling it to administer its funds on the same broad basis as is provided for in the new Charter of the British Red Cross Society, or whether the objects can be compassed by other means. But my Committee feel strongly that whatever may be found to be necessary should be done with as little delay as possible.

The war brought into being many Committees and provincial, district and women's work parties were established all over the country. For the first time there has arisen a realisation of the need for co-operative effort for the relief of distress and suffering, an effort which has been shared by all classes and creeds in the community. It is one of the aims of the present proposals, by organising branches for Red Cross work throughout India to take advantage of the machinery which the war has originated, and to divert its energies into the much-needed work of hospital improvement, both civil and military. If it is once realised how poor and destitute are the majority of patients, whether Indian, European or Eurasian, admitted to our civil hospitals, the Joint War Committee feel confident that the attempt to reconstitute the relief organisations, which came into being with the war, for the purposes we now have in view will meet with the readiest and most catholic response.

THE VICTORIA CROSS.

The announcement, made at the Delhi Durbar in 1911, that in future Indians would be eligible for the Victoria Cross gave satisfaction which was increased during the War by the award of that decoration to the following:—

Subadar (then Sepoy) Khudadad Khan, 129th Baluchis.—On 31st October 1914, at Hollebeke, Belgium, the British Officer in charge of the detachment having been wounded, and the other gun put out of action by a shell, Sepoy Khudadad, though himself wounded remained working his gun until all the other five men of the gun detachment had been killed.

Naick Darwan Sing Negi, 1-39th Garhwal Rifles.—For great gallantry on the night of the 23rd-24th November 1914 near Festubert, France, when the Regiment was engaged in retaking and clearing the enemy out of our trenches, and, although wounded in two places in the head, and also in the arm, being one of the first to push round each successive traverse, in the face of severe fire from bombs and rifles at the closest range.

Subadar (then Jamadar) Mir Dast, 55th Coke's Rifles.—For most conspicuous bravery and great ability at Ypres on 26th April 1915, when he led his platoon with great gallantry during the attack, and afterwards collected various parties of the Regiment (when no British Officers were left) and kept them under his command until the retirement was ordered. Jamadar Mir Dast subsequently on this day displayed remarkable courage in helping to carry eight British and Indian Officers into safety, whilst exposed to very heavy fire.

Rifleman Kulbir Thapa, 2-3rd Gurkha Rifles.—For most conspicuous bravery during operations against the German trenches south of Mauguisart. When himself wounded, on the 25th September 1915, he found a badly wounded soldier of the 2nd Leicestershire Regiment behind the first line German trench, and though urged by the British soldier to save himself, he remained with him all day and night. In the early morning of the 26th September, in misty weather, he brought him out through the German wire, and, leaving him in a place of comparative safety returned and brought in two wounded Gurkhas one after the other. He then went back in broad daylight for the British soldier and brought him in also, carrying him most of the way and being at most points under the enemy's fire.

Havildar (then Lance-Naick), Lala, 41st Dogras.—Finding a British Officer of another regiment lying close to the enemy he dragged him into a temporary shelter which he himself had made, and in which he had already bandaged four wounded men. After bandaging his wounds he heard calls from the Adjutant of his own Regiment who was lying in the open severely wounded. The enemy were not more than one hundred yards distant, and it seemed certain death to go out in that direction, but Lance-Naick Lala insisted on going out to his Adjutant, and offered to crawl back with him on his back at once. When this was not permitted, he stripped off his own clothing to keep the wounded officer warmer and stayed with him till just before dark, when he returned to the shelter. After dark he carried

the first wounded officer back to the main trenches, and then, returning with a stretcher carried back his Adjutant. He set a magnificent example of courage and devotion to his officers.

Sepoy Chatta Singh, 9th Bhopal Infantry.—For most conspicuous bravery and devotion to duty in leaving cover to assist his Commanding Officer who was lying wounded and helpless in the open. Sepoy Chatta Singh bound up the officer's wound and then dug cover for him with his entrenching tool, being exposed all the time to very heavy rifle fire. For five hours until nightfall he remained beside the wounded officer shielding him with his own body on the exposed side. He then, under cover of darkness, went back for assistance, and brought the officer into safety.

Naick Shahamad Khan, 89th Punjabis.—For most conspicuous bravery. He was in charge of a machine-gun section in an exposed position in front of and covering a gap in our new line within 150 yards of the enemy's entrenched position. He beat off three counter-attacks, and worked his gun single-handed after all his men, except two belt-fillers, had become casualties. For three hours he held the gap under very heavy fire while it was being made secure. When his gun was knocked out by hostile fire he and his two belt-fillers held their ground with rifles till ordered to withdraw. With three men sent to assist him he then brought back his gun, ammunition, and one severely wounded man unable to walk. Finally, he himself returned and removed all remaining arms and equipment except two shovels. But for his great gallantry and determination our line must have been penetrated by the enemy.

Lance-Dafadar Govind Singh, 28th Cavalry.—For most conspicuous bravery and devotion to duty in thrice volunteering to carry messages between the regiment and brigade headquarters a distance of 1½ miles over open ground which was under the observation and heavy fire of the enemy. He succeeded each time in delivering his message although on each occasion his horse was shot, and he was compelled to finish the journey on foot.

Rifleman Karan Bahadur Rana, 23rd Gurkha Rifles.—For conspicuous bravery and resource in action under adverse conditions, and utter contempt of danger during an attack. He with a few other men succeeded, under intense fire, in creeping forward with a Lewis gun in order to engage an enemy machine gun which had caused severe casualties to officers and other ranks who had attempted to put it out of action. No. 1 of the Lewis gun party opened fire and was shot immediately. Without a moment's hesitation Karan Bahadur pushed the dead man off the gun, and in spite of bombs thrown at him and heavy fire from both flanks, he opened fire and knocked out the enemy machine gun crew. Then switching his fire on the enemy bombers and riflemen in front of him, he silenced their fire. He kept his gun in action, and showed the greatest coolness in removing defects which had twice prevented the gun from firing. He did magnificent work during the remainder of the day, and when a withdrawal was ordered, assisted with covering fire until the enemy was close to him. He displayed throughout a very high standard of valour and devotion to duty,

Ressaidar Badlu Singh, 14th Lancers, attached 29th Lancers.—For most conspicuous bravery and self-sacrifice on the morning of the 23rd September 1918, when his squadron charged a strong enemy position on the west bank of the River Jordan, between the river and Kh. es Samariveh Village. On nearing the position Ressaider Badlu Singh realised that the squadron was suffering casualties from a small hill on the left front occupied by machine guns and 200 infantry. Without the slightest hesitation he collected six other ranks and with the greatest dash and an entire disregard of danger charged and captured the position, thereby saving very heavy casualties to the squadron. He was mortally wounded

on the very top of the hill when capturing one of the machine guns single-handed, but all the machine guns and infantry had surrendered to him before he died. His valour and initiative were of the highest order.

Rifleman Gobar Sing Negi, 2nd Battalion 39th Garhwal Rifles.—For most conspicuous bravery on 10th March 1915 at Neuve Chapelle. During an attack on the German position he was one of a bayonet party with bombs who entered their main trench, and was the first man to go round each traverse, driving back the enemy until they were eventually forced to surrender. He was killed during this engagement.

PASSPORT REGULATIONS.

The following regulations concerning passports are the chief :—

1. Applications for Indian Passports must be made in the prescribed form, and submitted either direct or through the local authority—(a) in the case of a resident in British India, to the Local Government or Local Administration concerned; (b) in the case of a resident in a Native State, to the Agent to the Governor-General or Political Resident concerned.

2. The charge for an Indian Passport is Re. 1.
3. Indian Passports are granted to—(a) Natural-born British subjects; (b) wives and widows of such persons; (c) Persons naturalized in the United Kingdom, in the British Colonies or in India; and (d) Subjects of Native States in India. A married woman is deemed to be a subject of the State of which her husband is for the time being a subject.

4. Passports are granted upon the production of a declaration by the applicant (in the case of child under 15 requiring a separate passport by the child's parent or guardian) in the prescribed form of application verified by a declaration made by a *Political Officer, Magistrate, Justice of the Peace, Police Officer not below the rank of Superintendent or Notary Public*, resident in India. If possible the declaration should be signed by an officer of the district in which the applicant is resident. Otherwise the issue of a Passport may be delayed while enquiries are being made from the local authorities.

5. If the applicant for a Passport be a Naturalized British subject, the certificate of naturalization must be forwarded with the form of application to the Officer empowered to grant the Passport. It will be returned with the Passport to the applicant through the person who may

have verified the declaration. Naturalized British subjects will be described as such, in their Passports, which will be issued subject to the necessary qualifications.

6. Small duplicate unmounted photographs of the applicant (and wife, if to be included must be forwarded with the application for a Passport, one of which must be certified on the back by the person verifying the declaration made in the application form.

7. Indian Passports are not available beyond two years from the date of issue. They may be renewed by any competent British Authority for four further periods of two years each after which fresh Passports must be obtained. The fee for each renewal is Re. 1.

8. Passports cannot be issued or renewed on behalf of persons already abroad: such persons should be told to apply for Passports to the London Foreign Office or nearest British Mission or Consulate. Passports must not be sent out of India by post.

9. In the case of an applicant for a Passport being unable to write English a transcription in English should be placed below the applicant's vernacular signature in the form of application. In the case of an illiterate person, a thumb impression should be substituted for a signature on the form of application, which should be certified by the person verifying the declaration.

Parda-nashin or gosha women desirous of travelling from India to Malaya, the Straits Settlements, the East Africa Protectorate, Uganda, Zanzibar, Mauritius, the Nyassaland Protectorate and the Union of South Africa are exempted from the necessity of attaching their photographs to their applications for passports or of appearing in person before the passport issuing authorities,

Racing.

Calcutta.

[Season 1918-19.]

Governor's Cup. Distance $1\frac{1}{2}$ miles.—

- Mr. Galstaun's St. Quin. (8st. 5lbs.), Barden. 1
 Mr. Ainsworth's Giacomi (7st. 10lbs.), Rose. 2
 Mr. Guthrie's Calder Vale (8st. 7lbs.),
 Macabe 3
 Mr. Goculdass' Matchlock (7st. 12lbs.), Flynn. 4

Also Ran :—One (9st. 9lbs.), Kiltai (9st.), Thunder (8st. 11lbs.), King's Fare (8st. 3lbs.), Red Quill (7st. 3lbs.), Bright Bird (6st. 12lbs.), Reigning Star (6st. 10lbs.), and Little Star (6st. 7lbs., carried 7st. 5lbs.).

Won by three and a half lengths : $2\frac{1}{2}$ lengths; and a head. Time—3mins. 2 secs.

Metropolitan Plate. Distance 6 furlongs.—

- Mr. Walsh's Necessity (7st. 7lbs.), Northmore 1
 Mr. Goculdass' Verge (9st., 12lbs.), Huxley .. 2
 Mr. Ramshaw's Poignant (8st. 5lbs.), Harrison 3
 Captain Bouvet's Louviers d'Or (7st. 11lbs.), J. Flynn 4

Also Ran :—Bydand (8st. 4lbs.), Symrex (8st. 3lbs.), Pastime (8st.), and Tootsie (7st. 13lbs.).

Won by one and $\frac{3}{4}$ lengths : $\frac{3}{4}$ and one length. Time—1min. 14 1-5 secs.

Prince of Wales Plate. Distance 1 mile.—

- Mr. Donetil's King's Fare (8st.), Harrison .. 1
 Mrs. Ainsworth's Little Nan (8st. 2lbs.), Rose 2
 Mr. Guthrie's Sampier (8st.), McCall .. 3
 Captain Bouvet's Louviers d'Or (8st. 3lbs.), Flynn 4

Also Ran :—Ballaghtobin (8st. 7lbs.), Calder Vale (8st. 6lbs.), Eagle's Nest (7st. 4lbs.), Camberley (7st. 4lbs.), and Reigning Star (6st. 7lbs.).

Won by three-fourth length, one and a quarter length; and a length. Time—1 min. 29 secs.

Carmichael Cup. Distance $1\frac{1}{4}$ mile.—

- Mr. Galstaun's St. Quin (7st. 7lbs.), Rose .. 1
 Mr. Goculdass' Baronvale (7st. 7lbs.), S. J. Meekings 2
 Captain Bouvet's Louviers d'Or (8st. 4lbs.), Pullin 3

Also Ran :—Kiltai (9st. 10lbs.), Double Scotch (9st.), Ballaghtobin (9st.), Oros (9st.), Redspier (8st. 4lbs.), King's Fare (8st. 4lbs.), Necessity (7st. 7lbs.).

Won by three lengths; one and a half length; and one and a half length. Time—2 mins. 6 4-5 secs.

Macpherson Cup. Distance St. Leger Course—

- Mr. Guthrie's Thunder (8st. 8lbs.), Pullin .. 1
 Mr. Guthrie's Calder Vale (8st. 7lbs.), McCall 2
 Mr. J. Ainsworth's Giacomi (8st. 1lb.), Rose, 3
 Mr. Goculdass' Matchlock (7st. 11lbs.), Flynn 4

Also Ran :—One (9st. 8 lbs.) St. Quin (9st. 4 lbs.), Kiltai (8st. 12lbs.), Double Scotch (18st 6lbs) and Bright Bird (8st: 7 lbs, carried 7st).

Won by a short head, a neck and a head. Time.—3 mins. 14 1-5 secs.

Indian Grand National. Distance 3 miles—

- Mr. Conningham's Black Mailer (12st. 7lbs.), Williamson 1
 Mr. Goculdass' Yuan (10st. 13lbs.), Scott .. 2
 Mr. Allan's Brandichoc (10st. 10lbs.), White. 3
 Messrs. Donetil and Page's Irishfield (11st. 2lbs.), Barker 4

Also Ran :—Lesto (11st. 6lbs.), Marie Antoinette (10st. 9lbs.) (fell), Canberra (10st. 8lbs.) (fell), Footsteps Fearless (9st. 10lbs.), Sea Lad (9st.), and Tarfoot (8st.).

Won by $1\frac{1}{4}$ lengths, 12 lengths and 4 lengths. Time—6 mins. 2 2-5 secs.

Bombay.

Byculla Club Plate. Distance $1\frac{1}{2}$ miles—

- Mr. E. L. F. DeSoysa's Mordennis (8st. 7lbs., carried 8st. 8lbs.), Trenoweth .. 1
 Mr. M. Goculdass' William the Beau (7st. 8lbs.), Purtoosingh 2
 Mrs. G. E. D. Langley's Caryanda (7st. 9lbs.), Meekings 3
 Mr. Guthrie's Sampier (7st. 13lbs., carried 8st.), Bowley 4

Also Ran :—Thunder (9st. 4lbs.), Calder Vale (9st. 21lbs.), First Flier (9st.), Ardreck (8st. 10lbs.), Giacomi (8st. 8lbs.), Fiz Yama (8st. 7lbs.), Matchlock (8st. 3lbs.), Baronvale (7st. 7lbs.), Brendan (8st. 2lbs.), Ballaghtobin (8st.), and Kinsale (7st. 7lbs.).

Won by a neck, a short head dividing the second, third and fourth. Time—2 mins. 34 secs.

Grand Western Handicap. Distance 1 mile—

- Mr. M. Goculdass' William the Beau (7st. 5lbs.), Lynch 1
 Messrs. J. H. Skelton and W. P. Pechey's Llangainor (9st. 4lbs.), Templeman .. 2
 Mrs. J. L. Ainsworth Little Nan (8st. 10lbs.), Rose 3
 Mr. R. R. S.'s Kinsale (7st. 9lbs.), Collis .. 4

Also Ran :—Calder Vale (9st. 7lbs.), Sam-
pier (8st. 3lbs.), Anthracite (7st. 6lbs.),
First Flier (9st. 2lbs.), Oros (8st. 13lbs.),
Brendan (8st. 13lbs.), Ardreck (8st.
7lbs.), Ballaghtobin (8st. 7lbs.), Barnovale
(7st. 13lbs.), Cairngillan (7st. 8lbs.), and
Necessity (7st. 7lbs.).

Won by a short neck, three-quarter length,
half a length. Time.—1 min. 39 secs.

Mansfield Plate. Distance 6 furlongs, 41
yards—

Mr. M. Goculdass' Verge (9st. 11lbs.), W. Huxley	1
Mr. R. R. S.'s Quarryman (9st. 12lbs.), F. Templeman	2
Mr. M. Goculdass' Forfeit Lass (7st. 5lbs.), Purtoosingh	3
Mr. Guthrie's Anthracite (6st. 11lbs.), Northmore	4

Also Ran :—Llangeinor (8st. 13lbs.), Poign-
ant (8st. 5lbs.), Black Walnut (7st.
10lbs.), Pastime (7st. 6lbs., carried 7st.
8lbs.), and Symrex (7st. 4lbs.).

Won by three-quarters of a length ; one
and a quarter lengths ; a neck. Time—
1 min. 14 3-5 secs.

Flying Plate. Distance 5 furlongs (straight)—

Mr. K. Shinde's Black Walnut (7st. 7lbs.), Lynch	1
Mr. R. R. S.'s Patrick (7st. 10lbs.), Collis ..	2
Mr. M. Goculdass' Tagamor (7st. 10lbs.), Northmore	3
Mr. M. Goculdass' Verge (9st. 12lbs.), Hux- ley	4

Also Ran :—Forward III (8st. 3lbs.), Forfeit
Lass (7st. 7lbs.), Poignant (8st. 10lbs.),
and Toostie (7st.).

Won by a neck, head divided second, third
and fourth. Time.—59 secs.

Willington Plate. Distance 1½ miles—

Mr. R. H. Gahagan's Ardreck (8st. 4lbs.), Lynch	1
Mr. J. C. Galstaun's Oros (8st. 11lbs.), Ruiz ..	2
Mrs. J. L. Ainsworth's Little Nan (8st. 8lbs.), Rose	3
Mr. M. Goculdass' William the Beau (7st. 9lbs.), Purtoosingh	4

Also Ran :—Llangeinor (9st. 6lbs.), Der-
singham (9st.), Brendan (8st. 7lbs.),
Mordennis (8st. 7lbs.), Sampier (8st.
1lbs.), Baronvale (7st. 9lbs.), and Kinsale
(7st. 6lbs.).

Won by a head, a neck, a short head. Time
—2 mins. 7 3-5 secs.

Colaba Plate. Distance 1 mile—

Mr. R. R. S.'s Waynflete (9st. 3lbs.), F. Templeman	1
Mr. E. L. F. DeSoysa's County Cricket (8st. 8lbs.), Trenoweth	2
Mr. Kelso's Miss Rolleston (7st. 8lbs.), Collis	3
Mr. Pine's Penny Pie (9st. 5lbs.), Harrison ..	4

Also Ran :—Gunning (9st. 12lbs.), Mazboot
(9st. 6lbs.), Redspear (9st. 3lbs.), Eagle's
Nest (8st. 10lbs.), Enchantment (7st.
7lbs.), Red Quill (8st. 2lbs.), Little Trout
(8st.), Birthday Clothes (8st.), Royal Band
(8st.), Royal Ambition (7st. 13lbs., carried
8st. 11lb.), Country Lad (7st. 11lbs.),
Bright Bird (7st. 4lbs.), and Athlete (7st.
2lbs., carried 7st. 3lbs.).

Won by one length; the same; three-
quarter length. Time—1 min. 40 secs.

Bombay City Plate. Distance 1¼ miles—

Mr. Guthrie's Calder Vale (8st. 5lbs.), Bar- nett	1
Messrs. R. D. Sethna and Frank's Brendan (7st. 10lbs.), Harrison	2
Mr. R. H. Gahagan's Ardreck (7st. 10lbs.), Lynch	3
Mr. Guthrie's Sampier (7st. 10lbs.), Buckley ..	4

Also Ran :—Thunder (8st. 10lbs.), Bache-
lor's Wedding (8st. 10lbs.), Oros (7st.
10lbs.), Eagle's Nest (8st. 5 lbs.), and
Cairngilloan (7st. 10lbs.).

Won by a neck ; half a length ; one length.
Time—2 mins. 6 3-5 secs.

Melbourne Plate. Distance 7 furlongs, 65 yards—

Mr. J. C. Galstaun's Oros (8st. 5lbs., carried 8st. 6lbs.), Ruiz	1
Messrs. J. H. Skelton and W. P. Pechey's Llangeinor (8st. 13lbs.), Templeman ..	2
Mr. Guthrie's Anthracite (7st. 6lbs.), Japheth	3
Mr. M. Goculdass' William the Beau (7st. 7lbs.), Purtoosingh	4

Also Ran :—Dersingham (9st. 1lb.), Triple
Alliance (9st.), Ardreck (8st. 9lbs.),
Sampier (8st. 6lbs.), Tootsie (7st. 4lbs.),
Tagamor (8st. 3lbs.), Kinsale (7st. 11lbs.),
and Necessity (7st. 10lbs.).

Won by a neck, one and a half lengths ;
one length. Time—1 min. 30secs.

Malabar Hill Plate. Distance 6 furlongs,
41 yards—

Mr. R. R. S.'s Quarryman (9st. 3lbs.), Templeman	1
Mr. M. Goculdass' Verge (9st. 3lbs.), Huxley ..	2
Mr. T. Tejpal's Glass Rock (7st. 10lbs.), Meekings	3
Mr. R. R. S.'s Patrick (7st. 10lbs.), Collis ..	4

Won by a short head ; three lengths ;
three-quarters of a length. Time—1
min. 15 2-5 secs.

Innovation Plate. Distance 6 furlongs, 41
yards—

Mr. R. R. S.'s Quarryman (9st.), Temple- man	1
Mr. M. Goculdass' Forfeit Lass (7st. 2lbs.), Purtoosingh	2
Mr. M. Goculdass' Tagamor (7st. 8lbs.), J. R. Flynn	3
Mr. M. Goculdass' Verge (9st. 13lbs.), Hux- ley	4

Also Ran :—Llangeinor (8st. 12lbs.), Poignant (8st. 11lbs.), Necessity (7st. 12lbs.), Black Walnut (7st. 10lbs.), Symrex (7st. 9lbs.), Tootsie (7st. 2lbs.), and Anthracite (7st. 2lbs.).

Won comfortably by one length; half a length; one length. Time—1 min. 15 secs.

Turf Club Cup. Distance 1½ miles—

Mr. R. H. Gahagan's Collingwood (9st. 12lbs.), Bowley 1
Mr. R. R. S.'s Kayid (9st. 10lbs.), F. Templeman 2
Mr. R. R. S.'s Dartmoor (9st. 3lbs.), Collis .. 3
General Nawabzada Obaidulla Khan's Fury (6st. 11lbs., carried 7st. 5lbs.), Harrison 4

Also Ran :—Durban (9st.), Gazal (7st. 6lbs.), Mandil (8st. 8lbs.), Hakum (late Merrily) (6st. 7lbs.), Earl (8st. 8lbs.), Nawabzada (7st. 7lbs.), Quantity (7st. 5lbs.), Mooltan (7st. 5lbs., carried 7st. 7lbs.), Amir Aswad (7st. 4lbs.), Nizam-ul-Mulk (7st. 3lbs.), Royal Court (6st. 12lbs.), Rose Hill (6st. 8lbs., carried 6st. 11lbs.), and Caulkley (late Conscription) (6st. 7lbs., carried 7st. 3lbs.).

Won by half a length; one length between second, third and fourth. Time—2 mins. 51 2-5 secs.

Bombay Derby. Distance 1½ miles—

Mr. Ali bin Talib's Hakum (late Merrily) (6st. 4lbs., carried 6st. 5lbs.), Japheth .. 1
Mr. R. H. Gahagan's Collingwood (9st. 11lbs.), Bowley 2
General Nawabzada Obaidulla Khan's Earl (8st. 8lbs.), Ruiz 3
Mr. Ali bin Talib's Mandil (8st. 5lbs., carried 8st. 6lbs.), Huxley 4

Also Ran :—Dartmoor (9st. 7lbs.), Palermo (7st. 8lbs.), Look Out (6st. 4lbs., carried 6st. 11lbs.), Longboat (8st. 5lbs.), Tasmania (7st. 8lbs.), and All Joy (7st. 4lbs.).

Won by a head; a short head; four lengths. Time—2 mins. 50 secs.

Dealers' Plate. Distance 1 mile—

General Nawabzada Obaidulla Khan's Earl (8st. 2lbs.), Harrison 1
Mr. R. H. Gahagan's Collingwood (9st. 8lbs.), Bowley 2
Mr. Heat's Portcullis (6st. 11lbs.), Purtoosingh 3
Messrs. Dara Cowasjee and Arnold's Red Cross (9st. 4lbs.), Hardy 4

Also Ran :—White Silk (9st. 8lbs.), Jawad (6st. 11lbs.), Palermo (7st. 12lbs.), Dartmoor (9st. 4lbs.), Nawabzada (8st. 10lbs.), Longboat (8st. 3lbs.), Look Out (6st. 11lbs., carried 7st.), Good Luck (7st. 13lbs.), Investor (7st. 12lbs.), and Ayr Laddie (6st. 7lbs.).

Won by one and a quarter lengths; a short head; one and a quarter lengths. Time—1 min. 50 4-5 secs.

Gough Memorial Plate. Distance 7 furlongs, 65 yards—

Messrs. Dara Cowasjee and Arnold's Red Cross (9st. 13lbs.), Trenoweth 1
Mr. Reuben Solomon's Dictate (6st. 7lbs.), Northmore 2
General Nawabzada Obaidulla Khan's Fury (7st. 5lbs.), Harrison 3
Mr. M. Goculdass' Mechanic (7st. 5lbs.), Purtoosingh 4

Also Ran :—Khundil (9st. 7lbs.), Dartmoor (9st. 6lbs.), Anaiza (8st.), Defender (8st. 6lbs., carried 8st. 8lbs.), Gazal (8st., carried 8st. 2lbs.), Battleaxe (7st. 7lbs., carried 7st. 8lbs.), Warminster (7st. 6lbs.), Powder Puff (6st. 10lbs., carried 7st. 2lbs.), Ata Allah (6st. 7lbs., carried 6st. 12lbs.), and Angler (6st. 7lbs., carried 6st. 10lbs.).

Won by a short neck; one length and a short head. Time—1 min. 40 2-5 secs.

Sir Cowasjee Jehangir Plate. Distance 6 furlongs, 41 yards—

Mr. Ali bin Talib's White Silk (9st. 8lbs.), W. Huxley 1
Messrs. M. T. and M. Shaffi's Suwat (6st. 7lbs., carried 7st. 5lbs.), Collis 2
Mr. R. R. S.'s Dartmoor (9st.) F. Templeman 3
Mr. N. R. Bolia's Mooltan (7st. 8lbs.), Buckley 4

Also Ran :—Four Aces (8st. 11lbs.), Mettle (6st. 7lbs., carried 6st. 10lbs.), Nizam-ul-Mulk (8st. 11lb.), Zuheir (7st. 10lbs.), Lord Rosebery (7st. 8lbs.), Red Prince (7st. 7lbs.), Osprey (7st. 4lbs.), Balloon (6st. 12lbs., carried 7st.), Silver Streak (6st. 7lbs.), and Powerful (6st. 7lbs., carried 6st. 12lbs.).

Won by three-quarters of a length; half a length separated the second, third and fourth. Time—1 min. 24 3-5 secs.

Gaye Plate. Distance 1½ miles—

Mr. Ali bin Talib's Mandil (8st.), Japheth .. 1
General Nawabzada Obaidulla Khan's Earl (8st. 9lbs.), Ruiz } Dead heat. 2
Mr. R. R. S.'s Kayid (9st. 9lbs.), Templeman }
Mr. N. Jehangir's Nassau (7st., carried 7st. 1lb.), White 4

Also Ran :—Durban (9st. 4lbs.), Palermo (6st. 7lbs.), Nawabzada (7st. 12lbs.), Mooltan (7st. 9lbs.), Quantity (7st. 9lbs.), Amir Aswad (7st. 8lbs.), Royal Court (7st. 2lbs.), Bluey Lee (6st. 12lbs., carried 7st. 5lbs.), and Tawdry (6st. 12lbs.).

Won by one and quarter length; dead heat for second place; the fourth one length off. Time—2 mins. 21 3-5 secs.

Lucknow.

Great Oudh Handicap. Distance 6 furlongs—

Messrs. C. Fitch and J. D. Scott's Lord Grey (8st. 4lbs.), Flynn	1
Mr. J. C. Galstaun's Toylene (8st. 13lbs.), Harrison	2
H. H. the Maharaja of Gwalior's Symptom (10st. 7lbs.), Trahan	3
H. H. the Maharaja of Patiala's Little Wonder (7st. 6lbs.), Northmore	4
Won by three lengths, a short head between second and third, one and quarter lengths between third and fourth. Time—1 min. 2 4-5 secs.	

Lieutenant-Governor's Cup. Distance 1½ miles—

Thakur Sipal Singh's Talcum (9st. 7lbs.), Flynn	1
Mr. Wilton Barlet's Sungrebee (9st. 9lbs.), Young	2
Mr. C. P. Page's Tarquin (7st. 9lbs.), Rose	3
H. H. the Maharaja of Patiala's Lebanon (9st.), Trahan	4
Also Ran :—Gracefield (10st. 4lbs.), Cauldron (7st. 4lbs.), Diana and Bezik (6st., carried 6st. 9lbs.).	
Won by ½ length, 3 lengths between second and third. Time—2 mins. 12½ secs.	

Murray Cup. Distance 1½ miles—

Thakur Sipal Singh and Rajendra Singh's Sarfaraz (8st. 9lbs.), Flynn	1
Mr. Alibo's Black Friar (9st. 3lbs.), Pullin	2
Mr. Hameed Uddin Ahmad's Black Prince (6st.), Abdul Khalik	3
Won by 4 lengths, 1½ lengths between second and third. Time—2 mins. 45 3-5 secs.	

Army Cup. Distance 7 furlongs—

Lieut.-Col. A. W. Cook Young's National (10st. 6lbs.), Capt. Bernard	1
Mr. Roscoe and Captain J. Grant's Grey Baz (10st. 9lbs.), Major Wilson	2
Major G. C. L. Keran's Burg (9st. 7lbs.), Owner	3
Lieut.-Col. J. S. Rivett Carnac's Orissa (10st. 6lbs.), Captain Robinson	4
Also Ran :—Rufus II (11st. 4lbs.), Fathabag (11st. 4lbs.), Hatham (11st. 4lbs.), Khazna (11st. 1lb.), Fairy Gold (11st. 1lb., carried 11st. 3lbs.), Nelson (10st. 9lbs.), Taisur (10st. 3lbs.), and Mushroom (10st. 3lbs.).	

Won by one length; three-quarters of a length. half a length Time—1 min. 42 secs.

Sandown Chase. Distance 2½ miles, over the steeplechase course.—

Captains J. M. Wallington and W. M. Newill's What Next (9st., carried 9st. 4lbs.), Captain Newill	1
---	---

Captain B. H. Bevan Petman's Harmony (10st., carried 10st. 3lbs.), Major Wilson .. 2

Also Ran :—Canberra (12st., carried 12st. 3lbs.), Captain Spooner refused.

Won by three lengths. Time.—5 mins. 11 secs.

Lucknow Chase. Distance about 2 miles over the steeplechase course.

Mr. H. V. S. Dillon's The Baron (10st.), Major Kerans 1 |

Captain H. M. Fleming's Red Lucifer (9st. 11lbs.), Captain Bernard 2 |

Captain Hartley Clarke's Hope Deferred (9st.), Crowden 3 |

Major W. G. W. Durham's Magpie (9st. 3lbs., carried 9st. 10lbs.), Owner 4 |

Also Ran.—Canberra (12st. 5lbs.), and Don't Worry (12st. 3lbs.).

Won by two lengths, four lengths between second and third, 20 lengths between third and fourth.

Gwalior.

Gwalior Cup. Distance 1½ miles—

Mr. E. A. Gubbay's Flotelle (8st. 7lbs., carried 8st. 8lbs.), Trenoweth	1
Mr. L. Ahmed's Le Soleil (7st. 11lbs.), Abdul Wahed	2
Mr. Kali Charans' Tarquin (7st. 11lbs.), White	3
Mr. M. Goculdass' Gipsy's Advice (8st.), Purtoosingh	4
Also Ran :—Hunyadi (9st. 8lbs.), Claim A (9st. 8lbs.), Frisette (9st. 1lb.), Athlete (9st.), Lemon (8st. 12lbs.), Santicola (8st. 4lbs.), Dress (8st.), Symptoms (7st. 8lbs.), Jannock (7st. 7lbs.).	
Won by one length, a neck, a head. Time—2 mins. 11 1-5 secs.	

Lashkar Cup. Distance 1 mile—

Colonel Cook Young and Sardar Sant Singh Chhachhi's Amphitryon (8st. 12lbs.), Northmore	1
Mr. M. Ghorpade's Maiden Palm (9st. 3lbs.), Ruiz	2
H. H. the Maharaja of Gwalior's Blackstone (8st. 12lbs.), Barnett	3
Mr. A. Hoyt's Discarded (9st. 7lbs.), Trahan	4
Also Ran :—R. G. (8st. 3lbs.), Tipster (7st. 13lbs.), Bahadur (7st. 7lbs., carried 7st. 9lbs.).	

Won by a head, half a length, one length. Time—1 min. 44 2-5 secs.

Yuvaraj Cup. Distance six furlongs—

Mr. J. H. Crawford's Trostan (7st. 10lbs.), Japheth	1
Mr. E. A. Gubbay's Little Trout (9st. 12lbs.), Trenoweth	2

General Nawabzada Obaidulla Khan's Premiere (9st. 13lbs.), Ruiz 3
Mr. J. C. Galstaun's Veres (9st. 8lbs.), Trahan. 4

Also Ran:—Lemon (8st. 12lbs.), Billy Bawn (8st. 6lbs.), Dollet (7st. 12lbs.), and Serbia (7st. 8lbs.).

Won by a neck; half length, neck. Time—1 min. 15 3-5 secs.

Chandpetha Cup. Distance 6 furlongs—

General Nawabzada Obaidulla Khan's Fury (9st. 12lbs.), Ruiz 1
Mr. Garrick's Rainbow (7st. 8lbs.), Northmore 2
Mr. J. N. De Souza's Investor (8st. 11lbs.), Collis 3
Mr. Kalicharan's Garland (8st. 1lb.), Easton 4

Also Ran:—Union Jack (9st. 12lbs.), Silver Streak (9st. 8lbs.), Balloon (8st. 13lbs.), Hatham (8st. 1lb.), Salsette (7st. 13lbs.), and Marconigram (7st.).

Won by one and half lengths three-quarters length, one length. Time—1 min. 23 3-5 secs.

Sir E. John Cup. Distance 7 furlongs—

Mr. Ahmed Hazamy's All Joy (7st. 11lbs.), Collis 1
General Nawabzada Obaidulla Khan's Marmora (8st. 2lbs., carried 8st. 7lbs.), Ruiz 2
Mr. Mahomed Ebrahim's My Royal (7st. 9lbs.), Japheth 3
Mr. Kalicharan's Garland (8st. 13lbs.), Purtoosingh 4

Also Ran:—Union Jack (9st. 5lbs.), Diamond King (8st. 9lbs.), and Financier (7st. 13lbs.).

Won by a head; a neck and half length. Time.—1 min. 37 secs.

Scindia Cup. Distance 7 furlongs—

H. H. the Maharaja of Patiala's Lebanon (7st. 12lbs.), Rose 1
General Nawabzada Obaidulla Khan's Final Proof (8st. 2lbs.), Bigland 2
Mr. M. Goculdass' Firpo (8st. 6lbs.), Purtoosingh 3
Mr. A. S. Maloobhary's Symrex (10st. 5lbs.), Ruiz 4

Also Ran:—Birthday Clothes (8st. 12lbs.), Oregon Pine (8st. 8lbs.), and Le Soleil (7st. 11lbs.).

Won by a neck; half a length; a neck. Time—1 min. 29 secs.

Residency Cup. Distance 7 furlongs—

Mr. Goculdass' Firpo (9st.), Harrison .. 1
Messrs. Hastings and Guthrie's Renette (7st. 10lbs.), J. R. Flynn 2
Mr. T. M. Thaddeus' St. Bawn (8st. 9lbs.), Ruiz 3
H. H. the Maharaja Patiala's Red Duke (8st. 1lb.), Barnett 4

Also Ran:—Japonette (7th 12lbs.).

Won by one and quarter lengths, three-quarter lengths. Time—1 min. 31 secs.

Mathradass Goculdass Cup. Distance 1 mile—

Mr. Kalicharan's Garland (7st. 12lbs.), Buckley 1
General Nawabzada Obaidulla Khan's Red Prince (9st. 4lbs.), Ruiz 2
Mr. M. Goculdass' Salsette (7st. 7lbs.), Purtoosingh 3
Mr. Goculdass' Royal Court (9st. 4lbs.), Harrison 4

Also Ran:—Bluey Lee (8st. 3lbs.), and All Joy (7st. 12lbs.).

Won by one and a quarter length, a head, half length. Time—1 min. 43½ secs.

Sports Club Cup. Distance 1 mile—

H. H. the Maharaja of Mysore's Maple (9st 12lbs.), Ruiz 1
Mr. Hamiduddin Ahmed's Black Prince (6st. 7lbs.), Purtoosingh 2
Won by a neck. Time—1 min. 55 secs.

W. I. T. C. Plate. Distance 5 furlongs—

General Nawabzada Obaidulla Khan's Powder Puff (8st. 2lbs.), Bullock .. 1
Sardar Dayalsingh Chhachi's Mount Pleasant (8st. 2lbs.), Barnett 2
H. H. the Maharaja of Patiala's Crusader (7st. 7lbs.), Rose 3
Mr. J. K. Irani's Bhookhri (9st. 5lbs.), Lynch 4

Also Ran:—Fury (9st. lbs.); Garland (8st.).

Won by a head; a neck; two lengths. Time—1 min. 7 4-5 secs.

Kamala Raja Cup. Distance 6 furlongs—

H. H. the Maharaja of Mysore's Japonette (7st. 10lbs.), Lynch 1
Mr. Pine's Japanese Pine (8st. 9lbs.), Harrison 2
Messrs. Hastings and Guthrie's Renette (8st. 5lbs.), J. R. Flynn 3
Mr. Leonard's Gantry (7st. 6lbs.), Northmore 4

Won by two and a half lengths; one and a half lengths; four lengths. Time—1 min. 15 4-5 secs.

Prag Narain Bhargava Cup. Distance 1 mile—

Thakur Sipal Singh and Rajendra Singh's Sarfaraz (10st. 12lbs.), Ruiz 1
H. H. the Maharaja of Patiala's Red Duke (10st. 12lbs.), Captain Bernard .. 2
Mr. D. Scott's Hard Up (6st. 7lbs., carried 6st. 10lbs.), Moosamdin 3

Won by two and quarter lengths, six lengths. Time min. 48 1-5 sec.

Points Cup. Distance 7 furlongs—

Sirdar Sant Singh Chachhi's Avant (7st. 8lbs.), Northmore	1
Mr. Alibo's Stepside (10st. 12lbs.), Pullin .. .	2
Mr. Ernest Fraser's Lady Lyric (7st. 10lbs.), Rose	3
Mr. Hameed Uddi Ahmad's Amalgam (7st. 4 lbs.), Saye	4
Also Ran :—Bonnie Blush (7st. 11lbs.)	
Won easily by 1½ lengths, 1½ lengths between second and third, 4½ lengths between third and fourth. Time—1 min. 31 3-5 secs.	

Meerut.

Meerut Gold Cup. Distance 5 furlongs—

Koer Manbir Singh's Qumri (7st. 10lbs.), Northmore	1
Thakur Sripal Singh's Indian Maid (7st. 9lbs.), Bigland	2
Major J. E. Power and Mr. Fairweather's Sui Kong (8st. 9lbs.), Captain Bernard .. .	3
Sirdar Gayan Singh's Shamrock (7st. 10lbs.), Buckley	4
Also Ran :—Hard Up (10st.), Country Maid (9st.), Lady Daphne (8st.), Panjabi (7st. 10lbs.), Elsie (7st. 9lbs.), and Lady Patricia (7st.).	
Won by six lengths, one length, a short head. Time—1 min. 5 2-5 secs.	

Cambridgeshire Plate. Distance 6 furlongs—

Mr. T. M. Thaddeus' Sospello. } (9st. 7lbs.), Ruiz	Dead heat. 1
Thakur Rajendra Singh's } Diana (6st. 10lbs.), Bigland. }	
Mr. A. C. Thomas' Beauvoir (9st. 10lbs.), Pullin	3
Also Ran :—Camille (9st. 7lbs.).	
Dead-heat; half a length. Time—1 min. 16 secs.	

Meerut Silver Vase. Distance 1 mile—

Messrs. S. A. Kassim and S. A. Abba's Charity (7st. 9lbs.), Buckley	1
General Raja Sir Hari Singh's Glencoe (9st. 3lbs.), Thomson	2
Mr. J. Lewis and Sardar Dayal Singh Chhachhi's Axis (8st. 9lbs.), Northmore .. .	3
Thakur Chandrika Prasad and Maheshwari Prasad's British (10st. 3lbs.), Ruiz .. .	4
Also Ran :—Iron Chest (9st. 7lbs.), Silver Prince (8st. 9lbs.), Paradise (8st. 5lbs.), Mubrook (8st.), Pharoah (7st. 10lbs.), and Keynote (7st. 4lbs.).	
Won by one and half lengths, half a length, same. Time.—1 min. 56 1-5 secs.	

Meerut Military Cup. Distance 1½ miles—

Brigadier-General L. G. F. Gordin's Lady Perchance (11st. 10lbs.), Ruiz	1
---	---

Captain Wallington and Captain Newill's What Next (11st. 3lbs.), Captain Newill. 2	
Major W. B. Stevenson's Feather (11st. 3lbs.), Captain Jerome	3
Also Ran :—White Patch (11st. 10lbs.).	
Won easily by three lengths, three lengths. Time—2 mins. 54 4-5 secs.	

Patiala Plate. Distance 6 furlongs—

H. H. the Maharaja of Patiala's Little Wonder (9st. 11lbs.), Harrison	1
Mr. E. Fraser's Lady Lyric (8st.), Buckley.. 2	
Messrs. Bishan Narain and Hari Shanker Bhargava's Army (7st. 5lbs.), Northmore. 3	
Mr. E. Cornparth's Bonnie Blush (7st. 8lbs.), Alford	4
Also Ran :—Moirs (10st. 7lbs.), Florrie M. (8st. 7lbs.), Punjabi (8st.), and Garibaldi (6st.).	
Won by a short head, half a length, neck. Time—1 min. 20 3-5 secs.	

Kadir Chase. Distance about 2½ miles, over the steeplechase course—

Mr. J. D. Scott's Jimerack (11st. 8lbs.), Thomson	1
Major Lucas Canberra (11st. 12lbs.), Captain Hilliard	2
Captain Bevan Petman's Harmony (10st. 3lbs.), Major Wilson	3
Lieut.-Colonel M. W. Brinton's Mayflower (11st. 3lbs.), Mr. Wyatts	4
Also Ran :—Simson (9st. 10lbs.) (fell).	
Won by half a length; three lengths. Time—5 mins. 28 1-5 secs.	

Jodhpur Cup. Distance about 2 miles, over the steeplechase course.—

Lt.-Col. I. O. W. Brinton's May Flower (11st. 9lbs.), Major Pilcher	1
Captain Bevan Pitman's Harmony (11st.), Major Wilson	2
Captains J. Wallington and W. M. Newill's What Next (11st., carried 10st. 4lbs.), Captain Newill	3
Also Ran :—Canberra (11st. 4lbs., carried 11st. 8lbs.).	
Won by three lengths, ten lengths. Time—4 mins. 17 1-5 secs.	

Karachi.

Sind Club Cup. Distance R. C. (about 1½ miles)—

Mr. Adam's Dunbar (9st. 4lbs.), Raymond.. 1	
Mr. A. R. Dakeel's Harrington (8st. 12lbs.), Buckley	2
Mr. Ladaram Kewalram's Newmarket (8st. 2lbs.), Bullock	3
Also Ran :—Gazette (9st.), Home Bird (8st. 7lbs.), Black Beauty (8st. 4lbs.), and Auditor (7st. 7lbs.).	
Won by two lengths, one length between second and third. Time.—2 mins. 45 secs.	

Civil Service Stakes. Distance 5 furlongs—

Mr. Robert's Black Hope (10st. 10lbs.),	
Major Masters	1
Mr. S. R. A. Wahab's Summerton (8st. 10lbs.), Majid	2
Mir of Khairpur's Badiel (8st. 10lbs.), Kuan Bog	3
Also Ran :—Molly (10st. 10lbs.), Fire Fly (10st. 10lbs.), Meteor (10st. 10lbs.), and Harrington (10st. 10lbs.).	
Won by 2 lengths, $\frac{1}{2}$ length between second and third.	

Medina Handicap. Distance R. C. about 1 mile, 3 furlongs—

Messrs. A. R. Dakeel and Yussuff Haroon's Home Bird (7st.), Dawood	1
Mrs. Menesche Shain's Gazetteer (8st. 5lbs.), Buckley	2
Mr. Mohamed Yaleg's Butter Cup (8st. 7lbs.), Najim	3
Also Ran :—Tagalie (10st.), Soubak (10st. 3lbs.), Newmarket (10st.), and Zubair (8st.).	
Won by four lengths; four lengths between second and third. Time.—2 mins. 50 secs.	

Edulji Dinshaw Cup. Distance 1 mile over 6 flights—

Captain Randal's Maid of the Mill (10st. 7lbs.), Owner	1
Mr. Blackden's A. C. T. (11st. 7lbs.), Major Masters	2
Won easily by ten lengths. Time—2 mins 45 secs.	

Amballa.**Punjab Country Bred Cup. Distance $1\frac{1}{2}$ mils.—**

Sirdar Jewan Singh's Hameth Boy (9st. 6lbs.), Captain Bernard	1
Major E. P. Shine's Mike (10st.), Captain Jarrah	2
Thakur Chandrika Pershad's Kishoree (8st. 2lbs.), Abdul Khalik	3
Also Ran :—Cairngarm (10st. 3lbs.), and Lady Lal (10st.).	

Won by a neck, eight lengths between second and third. Time.—2 mins. 57 4-5 secs.

BOXING.**Bangalore Tournament.**

Light Weight Championship.—Dr. Holman, R.E., (9st. 11lbs.). (Semi-finalist, All-India, 1918, and winner, Open, Naval and Military Tournament, 1918).

Bantam Weight Championship.—Corpl. Norris, Loyal North Lancashires (8st. 4lbs.). (Semi-finalist, All India, and winner C. N. and M. Tournament, 1918).

Middle Weight Championship.—Corpl. Gould, Royal Army Service Corps (11st.), runner up, All-India, 1918.

Special 6-Round Contest. (Officers).—Lieut. McArthur, Royal Scots (10st. 12lbs.).

Feather Weight Championship.—Sergeant Cook, Oxfords (9st. 2lbs.), winner C. N. and M. Tournament, 1919.

Heavy Weight Championship.—Sapper Wright, R.E. (12st. 9lbs.), winner, O. N. and M., 1919.

TENNIS.**Bengal—**

Men's Doubles—Shemedzu and Sokomato.
Mixed Doubles—Shemedzu and Mrs. Keays.
Ladies' Singles—Mrs. Berthond.
Men's Singles—Z. Shemedzu.

Western India Championships, Bombay—

Men's Singles—Major Rendall beat Z. Shemedzu, 10-8, 4-6, 6-2, 9-7.
Men's Doubles—W. Irwin and Major Rendall.
Mixed Doubles—W. Irwin and Mrs. Reynolds.
Bombay Gymkhana Mixed Doubles—Kelly and Mrs. Bonner.
Bombay Gymkhana Veteran's Doubles—Col. Low and Col. Burlton.
Marryat Cup, Bombay—Major J. G. Rendall.

Punjab Championships—

Men's Singles—Sleem.
Men's Doubles—Jacob and Sleem.

Ladies' Singles—Mrs. Peacock.

Mixed Doubles—Mrs. Peacock and Atkinson.

Baroda Tournament—

Men's Doubles—Major Rendall and Naoroji.
Ladies' Singles—Mrs. Walker.

Allahabad Tournament—

Ladies' Open Singles—Mrs. Dickens.
Gentlemen's Open Singles—Nagu.
Ladies' Open Doubles—Mrs. Fremantle and Mrs. Simpson.
Gentlemen's Open Doubles—Nagu and Mukerji.
Open Mixed Doubles—Mrs. Kellie and Bean.
Gentlemen's Handicap Singles—Rahmat Ullah.
Gentlemen's Handicap Doubles—Chadha and Ashgar.
Mixed Double Handicaps—Condon and Mrs. Condon.
Marker's event—Lateef.

HOCKEY.

Beighton Cup, Calcutta—

St. Xavier's College, Calcutta ..	.. 3 goals
Calcutta F. C. .. ..	.. Nil.

Aga Khan Cup, Bombay—

Igatpuri Ry. Gymkhana ..	.. 1 goal
Lusitanian S. C. .. ..	.. Nil.

Junior Aga Khan Cup—

B. E. S. School .. ..	.. 3 goals
St. Mary's School .. ..	.. 2 goals

Bangalore Cup Tournament—

St. Joseph's College .. ..	.. 4 goals
M. and S. M. Railway .. ..	.. 2 goals

Poona Open Tournament—

Friends' Union H. C. .. ..	.. 3 goals
Indian Pay-Cutters, Poona ..	.. Nil.

Gwalior Tournament—

Victoria Coll. School .. ..	.. 1 goal
Morar High School .. ..	.. Nil.

FOOTBALL.

Engineering College Tournament, Poona—

Engineering College, Poona ..	.. 3 goals
P. Y. C. Hindu Gymkhana ..	.. 2 goals

P. Y. C. Hindu Gym. Tournament, Poona—

V. J. Technical Institute ..	.. 1 goal
Fergusson College .. ..	.. Nil.

ATHLETICS.

Deccan Gymkhana Meeting Poona.

WRESTLING.

School Students.

Heavy Weight : Chakradev, B. G., Shivaji-rao, H. S., Indore.

Middle Weight : Valmite, N. K., New English School, Satara.

Light Weight : Shinde, D. R., Nutan Mah. Vidyalyaya, Kolhapur.

College Students.

Naravene, K. N., Baroda College, Baroda.

Amateurs.

Heavy Weights: Tandar, G. H., Miraj.

Middle Weights : not decided.

Light Weights: Naravene, M. N., Baroda.

Professionals : Winner of H. E. the Governor's Medal, Gama Kallu of Radhanpur.

MALKHAMB.

Fixed open.—(1) Lagu, G. N., High School, Poona; (2) Dingare, V. M., Yuvraj Ujyam-shala, Ujjain; (3) Desai, M. A., Military Accounts, Poona.

Fixed under 20.—(1) P. J. Patankar, Sangli State; (2) M. M. Latkar, High School, Satara; (3) G. D. Joshi, New English School, Poona.

MALKHAMB HANGING.

Open.—(1) G. N. Lagu, High School, Poona; (2) V. M. Dungare, Ujjain.

Under 20.—(1) Lajwankar, L. V., Poona; (2) Munjawar, Municipal School, Karad; (3) Anagal, P. B., Satara High School.

100 YARDS FLAT RACE.

(1) Hakeem Mammanlal, Rajaram High School, Kolhapur.

(2) D. Avoine, Grant Medical College, Bombay.

QUARTER MILE RACE.

(1) Havildar Shaik Ahmad, 2-116th Marathas.

(2) Ahmad Imam, Camp Government School, Poona.

(3) Gafoor, S. A., Camp Government School, Poona.

HALF MILE RACE.

(1) Ahmad Imam, Camp Government School, Poona.

(2) Havildar Shaik Ahmed, 2-116th Marathas.

(3) Gafoor, S. A.

MARATHON RACE.

(1) Changule, P. D., Mahavir Press, Belgaum.

(2) Hussein Wallad Raje Saheb, S. R. A. Club, Jamkhandi.

ATYA-PATYA.

(1) Poona Sportsmen, Poona City.

(2) New Poona College, Poona City.

KHO-KHO.

(1) Poona Sportsmen, Poona City.

(2) Sholapur District Team.

B. P. R. A. Meeting, Calcutta.

100 Yards Amateur Championship—W. R. Hildreth, Y. M. C. A., 1; P. Knight, C.F.C., 2; F. Rossetti, Y. M. C. A., 3. Time.—10 2-5 secs.

100 Yards British Army Championship.—Sergeant Stephenson, King's Regiment, Quetta, 1; Cpl. H. H. Oneymon, 1st G. B. Bedford Regt., Delhi, 2; Pte. H. Ward, 1-25 London Regt., Jullunder, 3. Time.—10 3-5 secs.

100 Yards Indian Army Championship.—Havildar Mian Singh, 93rd Burma Infantry, Delhi, 1; Naik Maung Dwe, Burma Rifles, Secunderabad, 2. Time.—10 4-5 secs.

100 Yards School Challenge Shield.—A. Zorab, St. Xavier's, 1; M. Francis, St. Xavier's, 2; P. Coelho, St. Joseph's, 3. Time.—12 1-5 secs.

220 Yards School Challenge Shield.—J. K. Bose, L.M.S., 1; Daniel Paul, Bishop School, 2; C. Sarkies, La Martiniere, 3. Time.—25 2-5 secs.

220 Yards Amateur Championship.—W. H. Hildreth, Y.M.C.A., 1; P. Knight, C.F.C., 2; F. Rossetti, Y. M. C. A., 3. Time.—22 4-5 secs.

$\frac{1}{2}$ Mile Indian Army Championship.—Havildar Mian Singh, 93rd Burma Infantry, Delhi, 1; L. N. Wassaka Singh, 1-90th Punjabees, Kamptee, 2; Naik J. C. Nath, 49th Bengalees, Dumdum, 3. Time.—2 mins. 8 secs.

1,000 Yards British Army Championship.—Lance-Cpl. Smith, North Staffords, Nowshera, 1; Sgt. Jones, London Regiment, Jullunder, 2; Sergt. Robert, King's Regiment, Quetta, 3. Time.—2 mins. 24 secs.

Boy Scouts Relay.—La Martiniere, 1; Bengal Boy Scouts, 2; Calcutta Boys' School, 3.

300 Yards Handicap.—Amateur—P. Knight, C. F. C. (scratch) 1; H. C. David, La Martiniere (8 yards) 2; G. S. Burgoyne, E. B. Railway, Kanchrapara (10 yards) 3. Time.—33 2-5 secs.

High Jump For Schools.—A. Whittenbury, St. Joseph's, 1; A. Berry, St. Joseph's, 2; Z. Stephen, La Martiniere, 3. Height 4 feet 11 $\frac{1}{2}$ in.

600 Yards British Army Championship.—Lance-Corpl. Smith, North Staffords, Nowshera, 1; Lt. Jarman, 1st South Lancashires, Quetta, 2; Sergt. Jones, London Regiment, Jullunder, 3. Time.—1 min. 16 1-5 secs.

440 Yards Indian Army Championship.—Havildar Mian Singh, 93rd Burma Infantry, Delhi, 1; Naik, 93rd Burma Infantry, Delhi, 2; Jamadar Maung Myit, 2-70th Burma Rifles, Secunderabad, 3. Time.—54 4-5 secs.

120 Yards Amateur Hurdles Championship.—W. R. Hildreth, Y. M. C. A., 1; E. Craig Williams, St. Xavier's, 2; A. K. Vanspall, Unattached, 3. Time.—16 3-5 secs.

2 Mile Bicycle Race.—E. J. Warren, 1-25th London Regiment, 1; S. Parkinson, 25th London Regiment, 2; R. C. Bayley, Unattached, 3. Very close race between the 1st and 2nd. Time.—5 mins. 26 3-5 secs.

High Jump Amateur Championship.—F. K. Mitter, St. Xavier's, 1; B. D. Chatterjee, Y. M. C. A., 2; J. Vallis, North Point College, Darjeeling, 3. Height 5 ft. 8 $\frac{1}{2}$ in.

440 Yards Amateur Championship.—W. R. Hildreth, Y. M. C. A., 1; P. C. Bannerji, Bengal Veterinary College, 2; P. Knight, C. F. C., 3. Time.—51 3-5 secs.

440 Yards British Army Championship.—Lance-Corpl. Smith, North Staffords, Nowshera, 1; Lt. Jerman, 1st South Lancashires, Quetta, 2; Sergt. Mesley, 1-25th London Regiment, Jullunder, 3. Time.—51 4-5 secs.

440 Yards School Challenge Shield.—J. K. Bose, L.M.S. College, 1; L. Deane, St. Xavier's, 2; D. Paul, Bishop's School, 3. Time.—58 3-5 secs.

1 Mile Indian Army Championship.—Naik Gulab Khan, 1-90th Punjabees, Kamptee, 1; Havildar Ram Singh, 48th Pioneers, Jhansi, 2; Havildar Amersingh, 93rd Burma Infantry, 3. Time.—4 mins. 54 4-5 secs.

1 Mile British Army Championship.—Lance-Corpl. O'Connor, No. 6 M. M. Battery, Peshawar, 1; Sergt. Roberts, King's Regiment, Quetta, 2; Pte. Needham, Duke of Wellington, 3. Time.—4 mins. 39 secs.

$\frac{1}{2}$ Mile Amateur Championship.—P. C. Bannerji, Bengal Veterinary College, 1; N. D. Jacob, Unattached, 2. Time.—2 mins. 16 2-5 secs.

1 Mile Relay.—British Army.—South Lancashires, 1; 1-25th London Regiment, 2; 1st Duke of Wellington, 3.

School Relay Race.—St. Xavier's, 1; La Martiniere, 2; Calcutta Boys' London Missionary Institution was the first, but was disqualified. Time.—36 3-5 secs.

Amateur Championship Relay Race.—E. B. S. Railway Sports Club, walk over.

British Army Marathon—Bomdr. Barrow, No. 6 Mountain Battery, R. A., Peshawar.

Indian Army Marathon—Naik Gulab Khan, 1-90th Punjabis, Kamptee.

The Minto Challenge Shield was won by the Y. M. C. A. The School and College Shield went to St Xavier's College. The Sir George White Shield went to the North Staffords and the Sir Allan Arthur Shield to the 93rd Burma Infantry.

GOLF.

Bombay.

Victory Cup. (Presented by Sir Robert Aitken.—G. W. Dawson.

Blackheath Gold Challenge Medal—J. W. Jessop.

Calcutta Silver Challenge Medal—G. A. Johnson.

Madras Silver Medal—A. Shearer.

Wimbledon Silver Challenge Cup.—J. R. Abercrombie.

Macdonald Cup—J. R. Abercrombie.

POLO.

Bombay Open Tournament—

Bhopal 8 goals
" Fire Flies " 1 goal

Radha Mohan Cup, Delhi—

Patiala " B " 2 goals

21st Lancers " A " Nil.

Lucknow Tournament—

12th Cavalry 5 goals

26th K. G. O. Lancers 3 goals

INDIAN POLO ASSOCIATION.

Up to 1891 each annual polo tournament held in India framed its own rules for the conduct of the tournament and its own polo laws; the only similarity about the various codes of the latter being their objective, namely, the safety of the game and its welfare. Most of these codes were badly worded, badly arranged, vague and unsatisfactory, an exception was the code in force at Bombay, which at that time had a flourishing and influential tournament. The Inter-Regimental Tournament adopted the Bombay code in the year 1888. The idea of forming a governing body to fulfil functions in relation to polo similar to those of the M.C.C. towards cricket was circulated at the Inter-Regimental Tournament at Amballa in 1891. As a result of this the Indian Polo Association came into being in 1892, with its constitution, its polo laws, its rules for the regulation of tournaments, and for the height and measurement of ponies, drafted and moulded into a form very similar to that of to-day. Certain changes have been made in the rules

and laws adopted by the Association at the time of its formation. In point of number these changes are comparatively few; but some of them are important and far reaching, and were introduced by reason of the necessity of keeping abreast of the development of the game following on its increasing popularity, not in India only, but also in other parts of the world. The Association thus became the recognised supreme authority in India over polo. It is the only authority, so far as India is concerned, which can amend, alter, vary, modify, or annul the existing laws of the game, or frame new laws; and it is the final tribunal of appeal in all matters in difference or dispute concerning polo.

The Army Polo Committee for 1918-19 consists of:—President: Major-General Leader, Inspector of Cavalry. Members: Major-General R. St. C. Lecky, late R. H.A.; Brig.-General R. M. Poore, late 7th Hussars; Brig.-General F. G. H. Davies, late Corps of Guides; and Brig.-General S. B. Grimston, late 18th Lancers. Honorary Secretary: Major R. W. W. Grimshaw, Poona Horse.

INTEREST TABLE.

From 5 to 12 per cent. on Rupees 100.

*Calculated for 1 Year, 1 Month (Calendar), 1 Week, and 1 Day (365 Days to Year),
the Decimal Fraction of a Pie for the Day being shown for the Day.*

Per cent.	1 Day.		1 Week.		1 Month.		1 Year.	
	RS.	A. P.	RS.	A. P.	RS.	A. P.	RS.	A. P.
5	0	0 2·630	0	1 6	0	6 8	5	0 0
6	0	0 3·156	0	1 10	0	8 0	6	0 0
7	0	0 3·682	0	2 1	0	9 4	7	0 0
8	0	0 4·208	0	2 5	0	10 8	8	0 0
9	0	0 4·734	0	2 9	0	12 0	9	0 0
10	0	0 5·260	0	3 0	0	13 4	10	0 0
11	0	0 5·786	0	3 4	0	14 8	11	0 0
12	0	0 6·312	0	3 8	1	0 0	12	0 0

Chronicle of the year 1919.

JANUARY.

1st.—There was published a message from H. M. the Queen-Empress to the women of India expressing warm appreciation of their fortitude and patience during the war, deeply sympathising with the sacrifices and sorrows it caused them and showing Her Majesty's intense sympathy with their well-being and advancement.—Obituary: Rt. Rev. G. A. Lefroy, D.D., Lord Bishop of Calcutta, Metropolitan of India.

2nd.—First contingent of the returning remnants of the Kut Garrison reached Bombay.

9th.—Indian Railway Administration report showed net working profit of £9,992,134 from state railways during 1917-18.—Bombay Cotton Mill Strike attained serious dimensions, number of strikers being estimated at one lakh and fundamental cause of strike being economical.

10th.—Appointment of Sir S. P. Sinha to be Under-Secretary of State for India and his elevation to the British peerage announced.

11th.—Second Conference organized by Indian Mathematical Society held in Bombay, the president Prof. A. C. L. Wilkinson, dealing in his address specially with the teaching of mathematics in secondary schools and with the policy of complete separation in teaching arithmetic, algebra and geometry.

13th.—Indian Science Congress opened in Bombay.

18th.—Death of H. M. the Emperor's youngest son, Prince John.

20th.—Council of Princes in Delhi, opened by H. E. the Viceroy.

22nd.—Bombay mill strike, millowners making large concessions, a measure they were led to take partly by grave epidemic of cholera arising from insanitary condition of mill labourers' quarter of the city, owing to population of those parts remaining about their homes instead of going to their mills. Cholera deaths to-day 311.

26th.—Partial settlement of Bombay mill strike ended.—Hon. Mr. Surendranath Banerjee unveiled portrait of late Dr. Dadabhai Naoroji in Bombay University Convocation Hall.

31st.—Government of India announced that owing to high prices of cotton cloth necessity has arisen for manufacture of standard cloth and that Cotton Cloth Act of 1918, providing for its compulsory manufacture on Government order by Indian cotton mills, would immediately be put into operation, output of five per cent. of looms being taken up monthly in first instance.—Public Meeting of Bombay ladies of all communities decided on formation of Bombay Women's Council for social and other suitable public work, thus continuing usefulness of organisation of women's services during war.

FEBRUARY.

1st.—Mining and Geological Institute in India, annual dinner at Calcutta, Mr. G. C. Lathbury, new President, in chair.

2nd.—Announced by Secretary of State for India that in accordance with proposal made in Report of Secretary of State and Viceroy on Indian Constitutional Reforms following committee appointed to enquire into organization of India Office and relations between Secretary of State in Council and Government of India:—Marquis of Crewe, Chairman; H. H. Aga Khan, Viscount Esher; Lord Inchcape; Mr. B. N. Basu; Sir J. B. Brunyate; Lieut.-Colonel Godfrey Collins; Mr. Harry Gosling; Professor A. B. Keith, Edinburgh University; Mr. Evelyn Murray, Secretary.

6th.—Imperial Legislative Council at Delhi, H. E. the Viceroy presiding and opening proceedings with lengthy speech.—Hon'ble Sir W. Vincent, Home Member, introduced Bill (afterwards known as the Rowlatt Bill) to make provision in special circumstances to supplement ordinary criminal law and for exercise of emergency powers by Government.

7th.—Obituary: General Sir John Watson, V.C., G.C.B., formerly of Bombay Army and old mutiny veteran.—Viceroy's Legislative

Council, Rowlatt Bill, after considerable discussion, referred to Select Committee.

9th.—H. E. Governor of Bombay arrived in Karachi on official visit to Sind.

13th.—Initial Meeting of Moderate politicians in Bombay decided to form Western India National Liberal Association.—Bombay Government in a *communiqué* stated lines on which they were prepared to assist in financing Co-operative Housing Societies.

19th.—Imperial Legislative Council.—Hon. Sir James Meston, Finance Member, introduced Excess Profit Tax Bill, which was referred to Select Committee.—Secretary of State announced revised rate of pay for officers of Imperial Indian Police from rank of Deputy Inspector-General downwards.

20th.—H. M. Habibullah Khan, Amir of Afghanistan, shot dead while asleep at Jelalabad.

23rd.—Celebration of 20th anniversary of opening of St. Thomas' Cathedral, Bombay.—Verdict given for defendant with costs in case brought in London against Sir Valentine Chirol by Mr. Bal Gangadhar Tilak for defamation, the action arising from Sir V. Chirol's description of Mr. Tilak's political activities.

MARCH.

3rd.—Official Afghan reports announced that Sardar Narsulla Khan, Naib-us-Saltanah, had renounced his claims to the Throne of Afghanistan and sworn allegiance, with all civil, military and religious representatives, to Sardar Amanulla Khan, Ain-Ud-Daula, third son on His late Majesty Habibulla Khan.

4th.—Lord Sinha of Raipur delivered maiden speech in House of Lords and received warm congratulations from various peers on his appearance.

6th.—Bombay Municipal Corporation unanimously resolved to present address of welcome to Right. Honorary Admiral Viscount Jellicoe of Scapa on his approaching visit to Bombay.

8th.—10th.—Imperial Legislative Council, Budget Debate.

10th.—H. E. Governor of Bombay formally opened Exhibition of War Relics and Naval Pictures in Royal College of Science, Bombay.—Government of India's report on Indian Education in 1917-18 published. It showed general increase of pupils and increase of 4,164 in the number of schools, the percentage of those under instruction having risen from 3.2 to 4.26 per cent. of population.

11th.—Imperial Legislative Council Budget Discussion.—Non-official resolutions.—Government of India announced despatch of their first despatch to Secretary of State dealing with general principles of Reform Scheme had been despatched.

12th.—Imperial Legislative Council.—H. E. Commander-in-Chief obtained leave to introduce Bill to extend operation of Indian Defence Force Act, 1917, this being *interim* measure to meet immediate requirements pending constitutional organisation and training of force that will be required to replace the Indian Defence Forces under post bellum conditions.—Hon'ble Sir William Vincent, Home Member, moved consideration of Select Committee's report on Emergency Powers (Rowlatt) Bill on which there was considerable debate.—Hon'ble Sir James Meston, Finance Member, presented Select Committee's report on Excess Profits Duties Bill.

14th.—Lord Jellicoe landed in Bombay.—Imperial Legislative Council.—Debate on Rowlatt Bill continued till 8-30 p.m., when consideration of Select Committee's report was concluded.

18th.—Imperial Legislative Council.—Rowlatt Bill, now become the Anarchical and Revolutionary Crimes Bill, finally passed by 35 votes to 20.—Government of India announced suspension of Central Recruiting Board and establishment in its place of an Indian Soldiers' Board to look after interests and welfare of serving, disabled, or diseased Indian soldiers and non-combatants and their dependents.—Government policy of largely expanding long-distance telephone communications in India announced.—Lord and Lady Willingdon left London *en route* to Madras, to Governorship of which Lord Willingdon appointed.

19th.—Imperial Legislative Council.—Excess Profits Duties Bill passed.—Bill to supplement Punjab Courts Act, 1918, to facilitate Punjab Provincial Bill for establishment of a High Court, introduced and passed through all stages.

20th.—Bombay Branch of European Association at its annual meeting specially considered proposed political reforms, Chairman announcing that the Association proposed to lay before Government the views of Europeans throughout India on the subject.

21st.—Imperial Legislative Council.—Indian Budget in its final form presented, and Council Session concluded.

25th.—H. E. the Viceroy arrived in Baroda on commencement of short tour to several Native States, this being first Viceregal Visit to Baroda since 1909.

26th.—Special Meeting of Calcutta Branch of European Association. Mr. T. W. Welby, Secretary, gave address on political reforms and discussion on same subject followed. It was announced that the Association had 8,000 members and were admitting ladies to membership.—H. E. Governor of Bombay arrived at Ahmedabad in commencement of brief tour in Gujarat, specially in famine districts.

27th.—H. E. Viceroy in course of his tour arrived at Hyderabad, Deccan.

30th.—Farewell banquet in Madras to H. E. the Governor and Lady Pentland.

31st.—A "Day of humiliation and prayer" was observed in Delhi when masses of people, at instigation of political agitators, demonstrated against Rowlatt Act, the mob became riotous and military had to fire upon them.

APRIL.

1st.—Bombay Government issued a note reviewing famine situation, showing that though practically all districts in Presidency are affected, general conditions of people continued on whole satisfactory, relief measures being adequate and provision for necessary medical relief in case of outbreak of disease having been made,

2nd.—Bombay Chamber of Commerce annual meeting, Chairman, Hon. Mr. M. N. Hogg, specially urged shorter hours and better housing for working-classes in the city and warned European community of necessity of their taking more active part in political life.

6th.—Meeting to protest in Bombay against recent legislation to deal with anarchical and

revolutionary crime in India, Mr. M. K. Gandhi addressing large crowd of people who came to bathe on the sea-face in the morning and a few shopkeepers and gharrwalas keeping holiday in response to his appeal for suspension in business in the city for purposes of prayer and fasting.

7th.—Satyagraha Sabha in Bombay decided to start publication and dissemination of proscribed literature and Mr. M. K. Gandhi and others sold literature of this kind in the streets, object being to protest against recent legislation for dealing with anarchy and revolution.

10th.—Mr. M. K. Gandhi, while travelling by train to the Punjab to take part in political activities there, was served with an order by the Punjab Government forbidding him to enter the Province and on his refusal to obey, was taken from his train, placed in another and returned to Bombay. Great excitement was caused in various parts of India by reports that he had been arrested. Disturbances occurred in Bombay, Ahmedabad, Lahore and Amritsar, several English people being murdered in Amritsar, while at Viramgam the Aval Karkun was burned live.

11th.—Lord Sinha at opening of Peace Conference in Paris announced that representatives of India whole-heartedly accepted the Labour Convention now that it made special allowance

for labour conditions in India and other countries differing in this respect from those of the West.

14th.—Martial Law proclaimed in Lahore and Amritsar districts, Government of India being satisfied that "a state of open rebellion" exists there.

16th.—H. E. the Governor of Bombay having summoned large gathering of representative citizens of Bombay warned them that the disquietitude over the Rowlatt Act was being exploited by people with dangerous aims and urged that leaders of public opinion should announce their disapproval of the revolutionary spirit and set their faces against doctrines of lawlessness being taught. He assured them that for the restoration of peace and order Government would discharge its own duty with the ample powers at its command.

17th.—Order and peace practically restored in Delhi, Amritsar and surrounding districts as result of measures taken under Martial Law.

18th.—Mr. M. K. Gandhi, in view of sudden outbreaks in various parts of Bombay and Punjab, advised Satyagrahis temporarily to suspend the disobedience of civil laws in which he had formerly encouraged them.

25th.—Bombay Millowners' Association annual meeting. The Chairman, Mr. C. N. Wadia, laid stress on necessity of ameliorating condition of millworkers in Bombay.

MAY.

2nd.—Afghan troops invaded British territory beyond Khaiber Pass under order of new Amir, Amanulla Khan.

3rd.—Government of India, in response to recent recommendation by Imperial Legislative Council, announced appointment of a Committee to investigate prison administration, with special reference to recent legislation and experience in western countries.

12th.—Demobilisation of British troops from Mesopotamia and India, with certain exceptions, topped on account of Afghan War—Lieutenant-governor of Punjab (Sir Michael O'Dwyer) at Government House, Lahore, received farewell addresses from deputations representing various communities who paid tribute to his statesmanship and expressed satisfaction that his Honour had firmly nipped in the bud the rebellion recently broke out in the Province. Sir Michael, replying, regretted that despite his warnings excitement of the passions of the people had led to rebellion and necessitated the proclamation of Martial Law, but said the evil of Martial Law was better than the greater evil of Mob-law. He bade farewell to the Province.

Secretary of State for India raised price of Council Drafts from 1s. 6d. to 1s. 8d.

16th.—Reports of Franchise Committee and Committee on Division of Functions, in connection with new reform scheme, published.

16th—17th.—Afghans heavily defeated at Dacca.

22nd.—Indian Budget introduced in House of Commons. King's Birthday Honours List in India included two G.C.S.I., two K.C.S.I., 7 C.S.I., 4 K.C.I.E., 31 C.I.E., 3 K.B.E., 2 D.B.E., 29 C.B.E., 92 O.B.E., 174 M.B.E., and numerous lesser distinctions.

26th.—Government of India's Despatch on Reform Scheme, after considering opinion of Provincial Governments and various public bodies and others, published.

29th.—Announced by Government of India that Secretary of State had appointed official and non-official committee to consider and report upon Indian Currency and Exchange problems.

30th.—India Reforms Bill published by Parliament.

Secretary of State issued explanatory memorandum regarding Indian Reforms Bill.

31st.—Violent cyclonic storm passed over Arabian Sea. It continued until 2nd June.

JUNE.

3rd.—Amir Amanulla Khan sent in letter, dated 28th May, asking for peace.—Government replied to question in House of Commons that Sir Sankaran Nair resigned Membership of Viceroy's Executive Council because he differed from his colleagues regarding continuance of Martial Law in the Punjab.

4th.—Government of India informed Amir terms on which they would grant armistice.

5th.—Afghan Commander-in-Chief retired hurriedly in front of British troops, leaving much munitions and stating that the Amir had ordered him to suspend hostilities.

9th.—Government of India on advice of Lieutenant-Governor of Punjab abrogated Martial Law in that Province as from midnight, except in regard to certain areas where its maintenance was considered necessary for military reasons.

5th.—Secretary of State (Mr. Montagu) moved second-reading of the Government of India Bill in Commons.

15th.—An English (Vickers-Vimy-Rolls Royce) biplane, 700 h.p., landed at Clifden (Galway) after a 16-hour flight across Atlantic from Newfoundland, piloted by Captain J. A. Leocks D.S.C., and navigated by Lieutenant A. W. Brown, both of whom were knighted by H. M. the King Emperor on their arrival in England, by air next day. (Sir J. Alcock was killed while trying a new machine six weeks later.)

17th.—Parliamentary Bill for authorising new constitutional reforms in India officially issued to press in India.

25th.—News published of abortive attempt of Amir of Afghanistan to obtain financial assistance from Bolsheviks at opening of hostilities against India.

28th.—German Peace Treaty signed in Paris.

JULY.

1st.—Governor of Bombay arrived Ahmednagar at commencement of brief Deccan tour.

2nd.—English airship R.-34, commander Major G. H. Scott, left Scotland for flight to New York and back.

3rd.—House of Commons passed by 336 votes to 23 appointment of members to Lords and Commons Joint Committee on India Reforms Bill.

English airship R.-34 reached Mincola, near New York, U.S.A., having completed the passage from England without assistance.

7th.—Bombay Legislative Council, Poona, H. E. the Governor presiding.—Peace Congratulations to His Majesty. Budget discussion.

8th.—Bombay Legislative Council.—Bill further to amend the Government occupants (Sind) Act, 1919, passed through all stages.—Private Resolutions.

9th.—Bombay Legislative Council.—Private resolutions. Sessions closed.

12th.—R-34 landed at Pulham, near London, after successful return voyage from America.

14th.—Government published summary of proposals by Committee on Home Administration of Indian affairs, main recommendations being for substitution of Advisory Committee for Secretary of State in place of India Council and recommendation against establishment of Select Committee of House of Commons on Indian affairs.

16th.—Parliamentary Joint Committee on Indian Reforms Bill held first sitting.

17th.—H. H. Maharaja of Bikaner arrived in Bombay on return from Peace Conference and was accorded cordial reception by some leading Indian Princes who came to Bombay to meet him and given reception by Western India National Liberal Association.

19th.—Festivities in celebration of Peace observed throughout India in common with rest of British Empire.

25th.—Governor of Bombay reached Belgaum at commencement of tour in Southern Mahratta Country.

26th.—Sir Hamilton Grant, representing Government of India, and Afghan Delegates met at Rawalpindi to discuss peace.

AUGUST.

2nd.—H. M. King-Emperor specially reviewed at Buckingham Palace Indian Contingent which arrived too late to participate in Peace Celebrations.

4th.—Despatch by H. E. Commander-in-Chief in India on part played by India, including Native States, in prosecution of war published in India.

8th.—Peace with Afghanistan signed at Rawalpindi.

9th.—Report of Calcutta University Commission of 1917-19 published, report proper and members' minutes comprising five volumes of 2,025 pages and stating that their another eight volumes not yet ready.

11th.—Secretary of State raised private Council Bills from 1s. 8d. to 1s. 10d.

23rd.—Obituary: Rt. Rev. Aloysius Gyr, S. J. Administrator Apostolic in Bombay.—Boundary Commission established by Afghan Peace Treaty for delimitation of Indo-Afghan frontier west of Khaiber began work.

30th.—Deputation to Secretary of State in London regarding treatment of Indians in South Africa. Mr. Surendranath Banerjee read a statement outlining latest position. Secretary of State said Commission of Inquiry promised by South Africa offered best hope of satisfactory solution and he had suggested not a domestic but an Imperial inquiry and had asked that Indian Government should be directly represented on Commission by one official and one non-official.

SEPTEMBER.

- 3rd.—Imperial Legislative Council, H. E. the Viceroy presiding, Simla. The Viceroy in opening the proceedings spoke for over an hour.—The Hon'ble Mr. Shafi introduced the Sea-Customs Act Amendment Bill, the Provident Funds Act Amendment Bill and the Census Bill (for a Census in 1921).—The Hon'ble Mr. W. Wilson brought a Bill to Amend the Indian Neutralization Act 1852 and a Bill to provide for more Effectual Control over the Administration of Charitable and Religious trusts.
- 4th.—Annual Report of the new Bombay Department of Industries showed the development of a large number of measures for assisting the foundation and growth of a variety of industries in the Presidency.
- 8th.—Constantinople report states that the Turkish Government propose to sell the famous Peacock Throne of Delhi for £750,000. It was pointed out that the Peacock Throne which formerly stood in Dewan-i-Am, Delhi, if it still exists, is at Teheran.
- 9th.—Full text of new Anglo-Persian agreement published in India.
- 10th.—Imperial Legislative Council.—On the motion of the Hon'ble Mr. Sarma a resolution tendering enthusiastic and loyal devotion and allegiance to H. M. the King Emperor on the completion of peace and conveying the thanks of the people of India to the Army and Navy and Air Force for their services during the war, was carried with acclamation.
- 11th.—Imperial Legislative Council.—Bills introduced to amend the Indian Coinage Act, the Cantonments Act, the Cinematograph Act, to remove Restriction on the Withdrawal of Capital from the Money Market by Companies and to amend the Indian Merchant Shipping Act, the Indian Tariff Act and the Indian Arms Act.—The Hon'ble Mr. Shafi introduced the Dacca University Bill, which was received with general approval.
- 12th.—The Indian Peace Contingent left London to return to India.
- 15th.—Bombay Provincial Co-operative Conference opened in Poona, H. E. the Governor presiding. His Excellency commented upon extraordinary progress made by co-operation in the Presidency and warmly praised the work of Mr. R. B. Ewbank, I.C.S., Registrar.—Imperial Legislative Council. Private Resolutions.
- 16th and 17th.—Imperial Legislative Council. Private Resolutions.
- 18th.—Imperial Legislative Council.—Punjab Indemnity Bill introduced.—Bombay Legislative Council, Poona. Bill further to amend the Bombay District Municipal Act, 1901, introduced.—Important speech by Lord Curzon at Government Banquet in London to the Persian Foreign Minister explaining and justifying the new Anglo Persian Agreement.
- 19th.—Bombay Legislative Council.—Private Resolutions.—Imperial Legislative Council. Punjab Indemnity Bill Debate.
- 23rd.—Imperial Legislative Council. Private Resolutions.—Sir George Buchanan opened a lively discussion in the *Times* on administrative policy in Mesopotamia, contending that money was being wastefully expended on schemes which could not become profitable within a prolonged period.
- 24th and 25th.—Imperial Legislative Council. Numerous minor bills recently introduced were passed.—Punjab Indemnity Bill passed.
- 25th.—Government of India in letters to the Chambers of Commerce outlined their policy regarding civil aviation, its principle features being encouragement of one large organization for inaugurating and maintaining a mail service throughout the land and that the air-transport organization should not be dependent on any particular aircraft construction company.

OCTOBER.

- 13th.—Indian Railway Conference opened at Simla, Col. Cameron presiding.
- 16th.—Government of India in a Resolution defined the conditions under which the members of the public services may resign their appointments.
- 18th.—Government of India published important Canadian and Australian Official Communications relating to the reciprocity resolution of the Imperial Conference regarding emigration from India to the British Dominions, the correspondence showing that they endorsed the reciprocity principle.
- 21st.—H. H. the Maharaja of Bikaner, at the meeting of his Legislative Council, made an important speech regarding political reform in India and the relationship between the Government of India and the Native States.
- 22nd.—Government of India announced the appointment of two special Officers to survey the water power resources of India.
- 28th.—Appointment announced of Lieutenant-General Sir William Marshall to be G. O. C., Southern Command, India.
- 31st.—Committee under the Presidency of Lord Hunter, appointed to inquire into the recent disorders in the Punjab and other parts of India, opened its public sittings in Delhi.—H. M. the Shah of Persia arrived in England on a State visit.

NOVEMBER.

3rd.—Fourth Conference of Indian Princes and Chiefs opened at Delhi. H. E. the Viceroy presided at the opening of the conference and announced that it was intention of His Majesty's Government to call into being a permanent Chamber of Princes.

5th.—First Oriental Conference opened in Poona, H. E. the Governor presiding at the opening. Sir R. E. Bhandarkar, President of the Conference, delivered an important address.

10th.—Hon'ble Mr. W. N. Hailey, Chief Commissioner of Delhi, appointed Member of the Viceroy's Council in succession to Sir James Meston, resigned on medical advice, Sir James Meston being raised to the British peerage.

11th.—Celebration throughout the British Empire of the signature of the Armistice with the Germans on this date in 1918.

12th.—Captain Ross—Smith left England in a Vickers-Vimy biplane for a flight by way of India to Australia.

21st.—Government of India issued full cabled summary of the main recommendations of the Joint Select Committee on the Government of India Bill.

23rd.—Government of India announced that they had decided, with approval of Secretary of State, that Germans shall be prevented from coming to India during a specific period of either three or five years after the conclusion of the war, the matter being reserved for further inquiries at the end of that period and the prohibition being subject to no exceptions unless Government of India were satisfied that there were special reasons justifying admission.

25th.—Captain Ross—Smith arrived at Delhi after a successful flight in Vickers-Vimy biplane from England.

27th.—Hon'ble Sir George Barnes met Committee of Bombay Indian Merchants Chamber and Bureau and discussed current question with them.—Announcement made that Government approve new rates of pay for I.C.S., and accept principle that a British-born civil servant in India and an India-born civil servant in Britain shall receive overseas allowance, besides salary.

30th.—Pope of Rome announced appointment of Father Alban Goodier, Jesuit Missionary in India and Principal of St. Xavier's College, Bombay, after the removal of the German fathers at the outbreak of War to the Archbishop of Bombay.

DECEMBER.

3rd.—Government of India Bill entered Committee stage in House of Commons.

5th.—Government of India Reform Bill passed third reading in House of Commons by agreement.—Hon'ble Sir George Barnes received in Delhi deputation from British Guiana sent to India to negotiate for Indian emigration to that part of the Empire.

10th.—Bombay Legislative Council.—Bombay Bill further to amend Bombay Prevention of Gambling Act, 1887, passed through all stages, object of Bill being to suppress bucket shops. Hon'ble Ebrahim Rahimtulla moved the first reading of Bill to provide for Constitution of Village Panchayats.

11th.—Bombay Legislative Council. Village Panchayats Bill referred to Select Committee.—Private Resolutions.

12th.—Bombay Legislative Council.—Private Resolutions.—House of Lords unanimously

passed second reading of Indian Reform Bills, Features of debate being remarkable speech by Lord Sinha.

13th.—Indian Peace Celebration commenced continuing for three days.

18th.—House of Lords finally passed Indian Reform Bills.

25th.—H. M. King Emperor addressed lengthy message to the Viceroy, Princes and his subjects in India, announcing the enactment of the Reforms Bills and showing how it was a natural sequel to the political development which has constantly marked progress of British rule in India.

26th.—Indian National Congress opened at Amritsar.

29th.—All-India Moslem League annual Session, Amritsar.

30th.—All-India Moderate Conference annual Session commenced in Calcutta.

Bibliography of India.

The general work of reference in one compact volume about India is still the late Sir William W. Hunter's *The Indian Empire: Its Peoples, History and Products* (Smith Elder, 1893, 28/-) which contains within its 800 pp. all the information, excellently arranged and indexed, that the general reader requires about this country. Its historical sections are particularly good giving a rapid and comprehensive bird's-eye-view of the course of Indian history from the advent of the Mahomedans in the eighth century down to nearly the close of the nineteenth century. Its statistics are based on the Census of 1891 and are therefore somewhat out of date. But, with this slight drawback which can be remedied by consulting the latest annual "Statistical Abstract" (see below), it gives in the compass of one volume a comprehensive view, neither too blurred nor too diffuse, of the Indian Empire and its past and present state. A more detailed account of India is to be found in the first four volumes of *The Imperial Gazetteer of India* (Clarendon Press, 1907-08, 6/- each). These volumes, which are introductory to the alphabetical Gazetteer (Vols. V-XXIV), are an expansion of Hunter's one volume work mentioned above; but all the chapters, with the exception of those on the history of British Rule, have been rewritten by expert writers who have been in most cases Indian administrators also. The statistics in these volumes are based on the Census of 1901. The second volume of the *Oxford Survey of the British Empire* (Clarendon Press, 1914, 14/-) is mostly devoted to India and contains an excellent concise account by various well known writers of the Indian Empire as it is to-day. The statistics of this volume are based on the latest Census of 1911. Sir Thomas Holdich's volume on *India in the "Regions of the World."* Series (Clarendon Press, 1904, 7/6) is a compact geographical account by an authoritative writer. The same author's *Gates of India* (Macmillan, 10/-) is a useful historical and geographical work on the North-West Frontier of India. Dr. George Smith's *Student's Manual of the Geography of British India* (Murray, 1882, 7/6) may still be used with profit, though parts of it are obsolete. Sir Thomas Holderness (fourth) edition, 1911, of Sir John Strachey's *India*, originally published in 1888, contains the best, succinct account of Indian administration and progress (Macmillan, 1911, 10/-). The same editor's little book in the Home University Library, *Peoples and Problems of India* (Williams and Norgate, 1912, 1/-) is a useful introduction to the study of present day India. A very good *Atlas of India* is published as Vol. XXVI of the *Imperial Gazetteer* (separately, 15/- Clarendon Press, 1909). It contains 28 general and 18 provincial maps besides 16 plans of Cities, including 3 of Bombay, 2 of Calcutta and 1 of Madras, Delhi, Simla, etc., each. A somewhat older though still excellent atlas is *Constable's Hand Atlas of India* (Constable, 1893, 14/-). It has 60 maps and plans and is accompanied by an index of 86 pp. The companion volume *Hand Gazetteer of India* by Jas. Bartholomew (Constable, 1894, 12/-) is a very concise gazetteer based on the second

edition of 1886 of Hunter's *Imperial Gazetteer*. An older and fuller gazetteer, though still having the advantage of being in one compact volume, is Lethbridge and Wollaston's revised abridgment of *Thornton's Gazetteer of India* (W. H. Allen, 1888, 21/-).

Official Publications.—The principal official publications of general interest and utility are the Annual Parliamentary Blue-Book well known as *The Moral and Material Progress and Condition of India* (issued about the middle of the year, Eyre and Spottiswoode, 1/6) and its accompaniment *The Statistical Abstract for British India* (issued towards the close of the year, about 1/6); the report on the Census of 1911 (Vol. I, Calcutta, Rs. 5, Text, Vol. II, Appendix giving tables, etc.); *Statistics of British India* (4 Vol., Calcutta) Administrative, Judicial, &c., annual *Statement of the Trade of British India with Foreign Countries* (Calcutta) and the annual *Review of Trade* (Eyre and Spottiswoode, 2/-); *Financial Statement of the Government of India* (Eyre and Spottiswoode). Every ten years is issued an elaborate review of the period as a Decennial number of the *Moral and Material blue-book* (noted above), and those by J. S. Cotton (pub. 1885) and by Sir Athelstane Baines (pub. 1894) are specially valuable. A "Memorandum on some of the Results of Indian Administration during the past Fifty Years of British Rule in India" issued in 1909 by the India Office (reprinted at Government Press, Calcutta, 1911, six annas, in a handy octavo) is a valuable summary of the improvements since 1858. A new publication, which attempts to outline the administrative problems of India and the way in which they are being met, was published in 1919 under the title of *India in the years 1917-1918*, by L. F. Rushbrook Williams, (Government Press, Calcutta), Re. 1.

History.—It is still the fashion to call James Mill's *History of British India* (Vols. I-VI up to 1805; continuation by H. H. Wilson, Vols. VII-IX, index Vol. X., last ed. 1858, W. H. Allen) the standard work on the subject, but it is out of date and in parts wrong-headed. No other author of equal ability and repute has treated the subject on a large scale, though Sir W. W. Hunter made the attempt but lived only to write two volumes dealing with the first century of the English in India up to 1700. (History of British India, Vols. I-II, 1899-1900, Longmans, 30/-). A masterly historical sketch of the whole period is to be found in Sir Alfred Lyall's *British Dominion in India*, (Murray, 1894, latest ed. 1907, 5/-) which is specially remarkable for the writer's theory that the British dominion in India grew and expanded on a regular plan foreseen by its founders and was not as is generally supposed the result of a happy chance. Another excellent and interesting sketch is contained in the first part of the *Historical Geography of India* by P. E. Roberts, who had assisted Hunter in the above mentioned work (Clarendon Press, 1916, 6/6). Miss Gabrielle Festings two works, *When Kings Rode to Delhi* (Blackwood, 1912, 7/6) and *Strangers Within the Gates* (Blackwood, 1914, 7/6) give a popular

but accurate presentation of the Mughal and British periods. Marshman's *History of India* (3 Vols., Longmans, 1871, 22-6) gives an excellent account, neither too detailed nor too concise, of the whole history and may be recommended as the most readable history of India till the Mutiny. There is an abridgment of Marsman in one volume (Blackwood, 6-). Trotter's *History of India*, recently revised and brought up to date by W. H. Hutton (S. P. C. K., 1917, 10/-) is a good and accurate compendium, as also is Meadows Taylor's *Students' Manual of Indian History* (Longmans, 7/6) which has long been well known for presenting a vast amount of facts in a small compass and in an agreeable style. For the Mahomedan period the standard work is Elphinstone's *History of India* (Murray, 16/-). A much more elaborate work for the same period is Sir Henry Elliot and Jas Dowson's *History of India as told by its own Historians* (8 Vols., 1867-1877, 8-8-0) giving translations of the chief Mahomedan historians. For the pre-Mahomedan period Vincent Smith's *Early History of India* (Clarendon Press, 3rd ed., 1914, 14/-) is the latest and best work. Mr. Vincent Smith is also the author of *The Oxford History of India*, from the earliest times to the end of 1911 (Clarendon Press). Romesh Dutt's *History of Ancient Civilisation in India* (2 Volumes, Trubner's Oriental Series, 21/-, 1893) and Mrs. Manning's earlier work *Ancient and Mediæval India* (2 Vols., 1869, 30/-, W. H. Allen) deal mainly with literature rather than history proper though they give a more or less vivid picture, of those early times.

Historical Biography.—The principal characters of Indian history, Hindu, Mahomedan and British such as Asoka, Babar, Akbar, Clive, Warren Hastings, Dalhousie, etc., are individually treated in the well known *Rulers of India* series of historical and biographical monographs (28 Vols., Clarendon Press, 1890-1902, 2/6 each). In the English *Men of Action* series (Macmillan, 2/6 each) there are also volumes on famous Anglo-Indian statesmen, such as Sir Alfred Lyall's *Warren Hastings*, Archibald Forbes' *Havelock*, Sir Richard Temples *Lord Lawrence*, Sir W. Butler's *Charles Napier*. Among biographies of Anglo-Indian worthies may be mentioned as specially interesting and valuable Sir George Forrest's *Life of Lord Clive* (Cassell, two vols., 1919), Col. Malleon's *Warren Hastings* (Chapman and Hall, 1894, 16/-), Bosworth Smith's *Lord Lawrence* (2 Vols., Smith Elder, 1883, new ed., Nelson's series, 1/-). Herbert Edwards and Merivale's *Sir H. Lawrence* (2 Vols., Smith Elder 1872), Sir W. Hunter's *Lord Mayo* (2 Vols., Smith Elder, 1875, 24/-), Sir W. Lee Warner's *Lord Dalhousie* (2 Vols., Macmillan, 1904, 25/-), Sir Alfred Lyall's *Lord Dufferin* (2 Vols., Murray, 1905, new ed., Nelson's series 1/-), Marshman's *Sir H. Havelock* (Longmans, 3/6), Martineau's *Sir Bartle Frere* (2 Vols., Murray, 1895, 32/-), Mallet's *Earl of Northbrook* (Longmans, 1910, 16/-), Lord Roberts' *Forty-one Years in India* (Macmillan, 1897, new ed. 6/-), Colebrooke's *Mountstuart Elphinstone* (2 Vols., Murray, 1884, 25/-), Trotter's *John Nicholson* (1897, Murray, 2/6) and *Bayard of India* (Outram) (Blackwood 5/-). Among noteworthy works treating of recent history since 1858 are Lovat Fraser's *India under Lord Curzon and After* (Heinemann, 1911, 16/-), Lady Betty Balfour's

Lord Lytton's Indian Administration (Longmans' 1899, 18/-), Sir W. Hunter's *Bombay, 1885-1900, a Study of Indian Administration* (Clarendon Press, 1892, 16/-), Col. Hanna's *Second Afghan War* (3 Vols., Constable, 1899-1907, 36/-), *Official History of the Second Afghan War*, (Murray, 1905, 21/-), Sir John Adye *Indian Frontier Policy*, a historical sketch (Macmillan 1897, 6/-), Trotter's *India under Victoria* (2 Vols., W. H. Allen, 1886, 30/-).

For the Indian Mutiny the standard history is Kaye and Malleon's *History of the Indian Mutiny* (new ed. 6 vols. Longmans, 21/-). Sir George Forrest's *History of the Mutiny* (4 vols., 1904-1914, Blackwood, 64/-) gives the chief records in the Indian archives. The best one-volume narratives are Malleon's shorter work, *Indian Mutiny* (in Messrs. Seeley's "Events of Our Own Times" series 5/-) and T. Rice Holmes' *History of The Indian Mutiny* (1883, W. H. Allen, new ed. Macmillan, 12/6).

Constitution and Administration.—The constitution of the Indian Government may be said to be in a flux, as important and far-reaching changes are under discussion and will be carried out with modifications of course in the near future. The contemplated changes have been embodied in the Report on Indian Constitutional Reforms, drawn up by the Secretary of State and the Viceroy (the Montagu-Chelmsford Scheme) and published in a handy octavo (Government Press, Calcutta, July 1918, one rupee). The present books on the Government of India will have to be thoroughly revised when these or other changes take effect. At the head of these books stands Sir Courtney Ilbert's "*The Government of India* being a Digest of the Statute Law relating thereto with historical introduction and explanatory matter" (Clarendon Press, 1st ed., 1898; 2nd edition, 1907, 3rd ed., 1915, 14/-; the first edition contains important constitutional documents such as minutes, despatches, charters, etc., covering 130 pp. which have been omitted in the subsequent issues.) The Digest drawn up by Sir C. Ilbert many years ago has been now embodied in the main in the "Government of India Act of 1915", which contains the entire body of law relating to the Government of India and which has been officially issued in octavo form (price 7d. Eyre and Spottiswoode). A supplement to Ilbert's third edition gives a comparison between the Digest given in the book and this Act (1916, 8d.). The constitutional documents from the Regulating Act of 1773 down to the Consolidating Act of 1915 have been printed in handy form in P. Mukerji's *Indian Constitutional Documents* (1915, Calcutta, Thacker Spink, Rs. 6); of the second ed. Vol. II, Rs. 1. has been issued in 1918 containing an historical introduction divided into two parts dealing with English political institutions and the present working constitution of India. The important constitutional documents have been also included in A. R. Iyengar's *Indian Constitution* (1909, 2nd enlarged ed. 1913, Loganathan Madras, Rs. 3) which contains an historical view of the various administrative institutions. The documentary matter extends to nearly 250 pp. Chesney's *Indian Polity* (3rd ed. 1894 Longmans) gives an excellent historical view of the system of administration as it grew up from the early days of the English in India.

down to the last decade of the nineteenth century; but it is a little out of date at present and will be much more so in the future. Sir William Lee Warner's *The Citizen of India* (1897, Macmillan 2/6) gives in brief outline a very good sketch of Indian administration. H. A. D. Phillips *Our Administration of India* (1888, W. Thacker, London 6/-) gives an account of the Revenue and Collectorate Administration in all departments, and though this is done with special reference to Bengal, it is more widely useful. A Mackenzie's *How India is Governed* (1882, Kegan Paul, 2) is a very brief sketch of the Indian constitution and administration and of England's work in India. For the system of judicial administration Herbert Cowell's *History and Constitution of the Courts and Legislative Authorities in India* (1872, 2nd ed., 1884, Thacker Spink, Calcutta, Rs. 6) is still useful, for the historical part.

Economics, Famines, etc.—Baden Powell's *Land Revenue and Tenure in British India* 2nd ed., 1907, revised by Sir T. Holderness, with in appendix added in 1912, 5/-) gives an account of land revenue system in India. Sir W. Hunter's *Annals of Rural Bengal* (1868, new ed., 1897, Smith Elder, 16/-) and his *Orissa* (2 vols., 1872, Smith Elder, 32/-) give a good idea of the economic condition of eastern India when it passed under British Rule. J. C. Jack's *The Economic Life of a Bengal District* (1916, Clarendon Press, 7/6) is an economic study of the people's life based on the minute data collected from innumerable families for the record of fights of Bengal and is of great value in estimating the resources of the people and the economic results of British rule. Sir Theodore Morison's *Industrial Organisation of an Indian Province* (1906, Murray 10/6) reviews the principal economic facts and shows their relation to the abstract science of economics. The author treats specially of the United Provinces to which his personal observation was mainly confined. Morison's *Economic Transition in India* (1911, Murray) deals with the development of industrial and economic resources of the country. Romesh Dutt's *Economic History of India under Early British Rule* (1902, Kegan Paul, 16) and the same in the *Victorian Age* 1904, Kegan Paul, 1904) are a powerful though one-sided indictment of British economic and revenue policy. Dutt, who is a staunch champion of the Permanent System of land tenure in vogue in Bengal and of its introduction into other parts of India, in his *Famines and Land Assessments in India* (1899, Kegan Paul, 7/6) on the same lines asserts that famines are due to the land policy of the Government. In *Famines* the best books are the Reports of the Famine Commissions pub. 1885, 1887, 1898 (Eyre and Spottiswoode). A good narrative of the last great famine of 1899-1900 to be found in Vaughan Nash's *The Great Famine: its causes* (1900, Longmans, 6/-). On the earlier great Bengal Famine, Sir Bartle Burrell's *The Impending Bengal Famine*, and how to prevent future famines in India, (1874, Murray, 5/-) is useful and suggestive. Charles Blair's *Indian Famines* in their historical and financial aspects (1874, Blackwood 5/-) contains good remarks on preventive and mitigating measures. Loveday's *History and Economics*

of Indian Famines (1893, 2/6) is a later book of the same kind. For public works, Railways, etc., Thornton's *Indian Public Works* (1875, Kegan Paul, 5/-) MacGeorge's *Ways and Works in India* (1893, Constable, 14/-), Horace Bell's *Railway Policy in India* (1894, 12/-), Deakin's *Irrigated India* (1893, Spon, 8/6) Buckley's *Irrigation Works of India* (1905 Spon, 42/-) Valentine Ball's *Coal Fields of India* (new edition, 1914, Calcutta) Report of the *Irrigation Commission* (1905, Eyre and Spottiswoode).

On Finance the work of the Strachey Brothers, Sir John and Sir Richard, *Finances and Public Works of India* (1882, Kegan Paul, 10/6) is valuable as describing the system of Indian Finance by persons who had intimate knowledge and personal experience. Reports of the Indian Currency Committee, 1893 and 1899, and of the Royal Commission on the administration of the expenditure of India, 1900, contain a vast mass of useful material. *Indian Currency* (1878, Longmans 2/-), by Dunning Macleod, treats of the means of introducing a Gold Currency in India, and of extending Banking and Paper Currency. H. J. Tozer's *British India and its Trade* (1902) gives a good view of the trade and surveys its growth during the latter half of the nineteenth century. Prof. Lees Smith's *Studies in Indian Economics* (1909, Constable, 3/6) and Jadunath Sarkar's *Economics of British India* (4th ed., 1917, Sarkar and Sons, Calcutta) are good introductions to the subject. The former is a series of lectures delivered by the author for the Bombay Government.

The Protected States.—Mallet's *Native States of India* (1875, W. H. Allen, 18/-) gives an historical sketch of the various states. The author was then connected with the state of Mysore as the guardian of its young ruler. The work of another official who was connected with Mysore as its Resident at the end of his Indian career, Sir W. Lee-Warner, *Protected States of India* (2nd ed., 1910, Macmillan, 10/-, 1st ed., 1894, under title "Protected Princes of India") whilst giving what he calls an "Account of India under Home Rule", chiefly discusses the question of the position of these states in relation to the British Government. A Punjab official, Sir Charles Tupper, in his *Our Indian Protectorate* (1893, Longmans, 16/-) similarly treats of the relations between the British Government and its Feudatories, but goes more into the past and has instructive chapters on indigenous home rule under the Maharrattas, the Sikhs, the Mahomedans, etc. This valuable work is now thoroughly out of print, but a good vernacular translation in Gujarati by A. N. Buch (1900 Rajkot) is available. Sir Lepel Griffin's *Punjab Chiefs* (1865 Trubner) and *Rajas of the Punjab* (1870, 2nd ed. 1873, Trubner, 20/-) give in considerable detail the history of the principal Punjab states like Patiala, Kapurthala, Nabha, etc. Massy prepared a new edition of the former book (1889, Allahabad, Pioneer Press) and completed it by another *Chiefs and Families of Note in the Punjab* (1890, Allahabad, Pioneer Press) and they give short notices of all the ruling chiefs of the Punjab. Abernethy Mackay who was tutor to the Raja of Ratlam in Central India and Principal of

Rajkumar College at Indore, wrote on the *Chiefs of Central India* (1879) and on the *Native Chiefs and their States in 1877* (1878). Both books are noteworthy. Aitchison's *Treaties, Engagements and Sanads* relating to India and the neighbouring countries (3rd ed., 1893, 11 volumes, Calcutta, Government Press, Rs. 34) is the standard collection of all the treaties with the Native Feudatory States. The

relations with the Nizam are investigated in H. G. Brigg's *The Nizam* (2 vols., 1861, Quaritch, 28/-) and Hastings Fraser's *Our Faithful Ally, the Nizam* (1865, Smith Elder 18/-). The relations with the Gaekwar of Baroda are exhaustively treated in *The Guicowar and his Relations with the British Government* (1863, Education Press, Bombay) by Col. R. Wallace who was Resident at Baroda.

Stock Exchange.

There are about 446 Share and Stock Brokers in Bombay. They carry on business in the Brokers' Hall, bought in 1899 from the funds of the **Share and Stock Brokers' Association** formed to facilitate the negotiations and the sale and purchase of Joint Stock securities promoted throughout the Presidency of Bombay. Their powers are defined by rules and regulations framed by the Board of Directors and approved by the general body of Brokers. The Board has the power to fix the rates in times of emergencies. It is composed of Sir Shapurji Broacha (Chairman), Mr. Vurjivandas Tribhovandas, Mr. Maneckji Pestonji Bharucha, Mr. D. D. Kanga, Mr. Naserwanji Pherozeshah Karani, Mr. Nagji Motichand, Mr. Chunilal Veerchand, Mr. Nanabhoj Tullockchand, Mr. Manecklal Jethabhai, Mr. Dinsha Bejunji and Mr. Jehangir Bhikaji (Secretary).

At first the admittance fee for a broker was Rs. 5 which was gradually raised to Rs. 7,000. The fee for the Broker's card has increased and it was recently sold by public auction for Rs. 21,800. The rules of the Association were revised in October 1916 and from the New Year the purchaser of shares has to pay the stamp and transfer fee instead of the seller. There are two classes of Exchange Brokers, Europeans and Indians, the latter being certified for recognition by the native Stock Exchange. Business in Government Paper and all other Trustees' Authorised Securities is carried on under the rules of the Bombay Stock Exchange, but in the street outside the hall.

In November 1917 a second Stock Exchange was opened in Bombay, with its headquarters in Apollo Street. The directors of this exchange known as the **Bombay Stock Exchange, Ltd.**, are Mr. Rameswandas Birla, Rai Bahadur Sir Sarupchand Hookamechand, Kt., Mr. Kastoorbhai M. Nagarshett, Mr. Fatechand Ruiya, Mr. Jyotendra. L. Mehta, Mr. Shreeram Jhoogunvala, Mr. Lachhmandas Daga, Rai Bahadur Jammalal Bachhraj, Mr. Madanlal Chowdry, Mr. W. T. Halai, Mr. Naranji Dayal and Mr. Surbhai G. Desai (*ex-officio*).

For many years the **Calcutta Share Market** had its meeting place in various gullies in the business quarter and was under no control except that of established market custom. In 1908 the **Calcutta Stock Exchange Asso-**

ciation was formed, a building was leased in New China Bazar Street now called Roy's Exchange Place, a representative committee was formed, and the existing trade custom were focussed into rules drawn up for the conduct of business. Admittance as a member of the Stock Exchange is by vote of the committee, and the entrance fee is at present Rs. 500. The market custom differs very materially from that of most other Stock Exchange since there are no settlement days, delivery is due the second day after the contract is passed and sales of securities are effected for the most part under blank transfers. Another difference in procedure as compared with the London Stock Exchange is that there are no "Jobbers" in the Calcutta market. The Dealers who take their place, more or less, are not compelled to quote a buyer's and a seller's rate and are themselves Brokers as well as dealers, calling upon the Banks and other clients and competing with Brokers.

There are about 150 members, besides outside brokers, the former consisting of European, Jewish, Marwari, and Bengalee firms. The Marwaris predominate. The volume of *bona fide* investment business is comparatively small and insufficient for the number of Brokers. The principal business transacted on the Calcutta Stock Exchange is connected with the shares in Jute Mills. Coal Companies, Tea Companies registered in India, Miscellaneous industrial concerns (such as Paper, Flour, Sugar), Railway and Transit Companies and Debentures, the latter comprising those of Industrial concerns and Trustee Investment Securities, namely, Municipal and Port Trust Debentures. When speculative operations are being actively engaged in, which frequently take the form of forward contracts for delivery in three months time, the value of securities changing hands may aggregate as much as a crore of Rupees per month, but since the trade is not constant and one year differs very much from another it would be difficult to estimate what the average annual turn-over would amount to. The association has an honorary secretary and is not at present affiliated to the Bengal Chamber of Commerce.

There are two firms of Brokers in Madras and a Stock Exchange is to be opened.

Indian Stamp Duties.

	Rs. a.		Rs. a.
Acknowledgment of Debt ex. Rs. 20 ..	0 1	In any other case.. ..	5 0
Affidavit or Declaration	1 0	Cancellation	5 0
Agreement or Memo. of Agreement—		Certificate or other Document relating to	
(a) If relating to the sale of a bill of exchange	0 2	Shares	0 1
(b) If relating to sale of a Government security, or share in an incorporated company or other body corporate—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000 or part.		Charter Party	1 0
(c) If not otherwise provided for ..	0 8	Cheque	0 1
Appointment in execution of a power ..	15 0	Composition—Deed	10 0
Articles of Association of Company ..	25 0	Conveyance, not being a Transfer—	
Articles of Clerkship	250 0	Not exceeding Rs. 50	0 8
Award, any decision in writing by an Arbitrator, other than by an Order of the Court. Where the value does not exceed Rs. 1,000, same duty as a Bond.		Exceeding Rs. 50, not exceeding Rs. 100	1 0
In any other case	5 0	For every Rs. 100 or part in excess of Rs. 100 up to Rs. 1,000	1 0
Bill of Exchange or Promissory Note payable on demand	0 1	For every Rs. 500, or part thereof, in excess of Rs. 1,000.. ..	5 0
Where payable otherwise than on demand but not more than one year after date or sight—Not exc. Rs. 200, a. 3; exc. Rs. 200, not exc. Rs. 400, a. 6; exc. Rs. 400, not exc. Rs. 600, a. 9; exc. Rs. 600, not exc. Rs. 800, a. 12; exc. Rs. 800, not exc. Rs. 1,000, a. 15; exc. Rs. 1,000, not exc. Rs. 1,200, R. 1 a. 2; exc. Rs. 1,200, not exc. Rs. 1,600, R. 1 a. 8; exc. Rs. 1,600, not exc. Rs. 2,500, Rs. 2, a. 4; exc. Rs. 2,500, not exc. Rs. 5,000, Rs. 4 a. 8; exc. Rs. 5,000, not exc. Rs. 7,500, Rs. 6 a. 12; exc. Rs. 7,500, not exc. Rs. 10,000, Rs. 9; exc. Rs. 10,000, not exc. Rs. 15,000, Rs. 13 a. 8; exc. Rs. 15,000, not exc. Rs. 20,000, Rs. 18; exc. Rs. 20,000, not exc. Rs. 25,000, Rs. 22 a. 8; exc. Rs. 25,000, not exc. Rs. 30,000, Rs. 27; and for every add. Rs. 10,000, or part thereof, in excess of Rs. 30,000, Rs. 9.		Copy or Extract—If the original was not chargeable with duty, or if duty with which it was chargeable does not exceed 1 Rupee.. ..	0 8
Where payable at more than one year after date or sight, same duty as a Bond.		In any other case	1 0
Bill of Lading	0 4	Counterpart or Duplicate—If the duty with which the original instrument is chargeable does not exceed one rupee —The same duty as is payable on the original. In any other case	1 0
Bond (not otherwise provided for)—		Delivery Order	0 1
Not exc. Rs. 10.. ..	0 2	Entry in any High Court of an Advocate or Vakil	500 0
Exc. Rs. 10, but not exc. Rs. 50 ..	0 4	In the case of an Attorney	250 0
Exc. Rs. 50, but not exc. Rs. 100 ..	0 8	Instrument—Apprenticeship	5 6
Up to Rs. 1,000, every Rs. 100 or part.	0 8	Divorce	1 0
For every Rs. 500 or part, beyond Rs. 1,000	2 8	Other than Will, recording an adoption or conferring or purporting to confer Authority to adopt	10 0
Bond, Administration, Customs, Security or Mortgage Deed—For amount not exceeding Rs. 1,000, same duty as a Bond.		Lease—Where rent is fixed and no premium is paid, for less than 1 year, same duty as Bond for whole amount; not more than 3 years, same as Bond for average annual rent reserved; over 3 years, same as Conveyance for consideration equal to amount or value of the average annual rent reserved; for indefinite term, same as Conveyance for a consideration equal to the amount or value of the average annual rent which would be paid or delivered for the first ten years if the lease continued so long; in perpetuity, same as Conveyance for consideration equal to one-fifth of rents paid in respect of first 50 years. Where there is premium and no rent, same as Conveyance for amount of premium; premium with rent, same as Conveyance or amount of premium in addition to the duty which would have been payable on the lease if no fine or premium or advance had been paid or delivered.	

	Rs.	a.
<i>Letter</i> —Allotment of Shares	0	1
<i>Credit</i>	0	1
<i>License</i>	10	0
<i>Memo. of Association of Company</i> —If accompanied by Articles of Association	15	0
If not so accompanied	40	0
<i>Notarial Act</i>	1	0
<i>Note or Memo</i> , intimating the purchase or sale—		
(a) Of any Goods exceeding in value Rs. 20	0	2
(b) Of any Stock or marketable Security exceeding in value Rs. 20—Subject to a maximum of Rs. 10, a. 1 for every Rs. 10,000, or part.		
<i>Note of Protest</i> by a Ship's Master ..	0	8
<i>Partnership</i> —Where the capital does not exceed Rs. 500	2	8
In any other case	10	0
Dissolution of	5	0
<i>Policy of Insurance</i> —		
(1) <i>Sea</i> —Where premium does not exceed rate of 2a., or $\frac{1}{2}$ per cent. of amount insured	0	1
In any other case for Rs. 1,500 or part thereof	0	1
(2) <i>For time</i> —For every Rs. 1,000 or part insured, not exc. 6 months ..	0	2
Exceeding 6 and not exceeding 12 months	0	4
If drawn in duplicate, for each part:—Half the above rates, for Sea and Time.		
(3) <i>Fire</i> —When the sum insured does not exceed Rs. 5,000	0	8
In any other case	1	0
In respect of each receipt for any payment of a premium on any renewal of an original policy—One half of the duty payable in respect of the original policy in addition to the amount, if any, chargeable under Art. 53 (<i>Receipt</i>).		
(4) <i>Accident and Sickness</i> —Against Railway accident, valid for a single journey only	0	1
In any other case—for the maximum amount which may become payable in the case of any single accident or sickness where such amount does not exceed Rs. 1,000, and also where amount exc. Rs. 1,000, for every Rs. 1,000 or part	0	2
(5) <i>Life, or other Insurance, not specially provided for</i> —		
For every sum insured not exceeding Rs. 250	0	2
For every sum insured exceeding Rs. 250 but not exceeding Rs. 500	0	4
For every sum of Rs. 1,000 in excess of Rs. 500	0	6

	Rs.	a.
If drawn in duplicate, for each part—		
Half the above rates.		
In case of a re-insurance by one Company with another— $\frac{1}{4}$ of duty payable in respect of the original insurance, but not less than 1 anna, or more than 1 R.		
<i>Power of Attorney</i> —		
For the sole purpose of procuring the registration of one or more documents in relation to a single transaction or for admitting execution of one or more such documents	0	0
When required in suits or proceedings under the Presidency Small Causes Courts Act, 1882	0	0
Authorising 1 person or more to act in a single transaction other than that mentioned above	1	0
Authorising not more than 5 persons to act jointly and severally in more than 1 transaction, or generally ..	5	0
Authorising more than 5 but not more than 10 persons to act	10	0
When given for consideration and authorising the Attorney to sell any immoveable property—The same duty as a Conveyance for the amount of the consideration.		
In any other case, for each person authorised	1	0
<i>Protest of Bill or Note</i>	1	0
<i>Proxy</i>	0	0
<i>Receipt for value exc. Rs. 20</i>	0	0
<i>Reconveyance of mortgaged property</i> —		
(a) If the consideration for which the property was mortgaged does not exceed Rs. 1,000—the same duty as a conveyance for the amount of such consideration as set forth in the Reconveyance.		
(b) In any other case	10	0
<i>Release</i> —that is to say, any instrument whereby a person renounces a claim upon another person or against any specified property—		
(a) If the amount or value of the claim does not exceed Rs. 1,000—the same duty as a Bond for such amount or value as set forth in the Release.		
(b) In any other case	5	0
<i>Respondentia Bond</i> —The same duty as a Bond for the amount of the loan secured.		
<i>Security Bond</i> —(a) when the amount secured does not exceed Rs. 1,000—the same duty as a Bond for the amount secured.		

	Rs. a.		Rs. a.
(b) In any other case	5 0	<i>Transfer of any Interest secured by a Bond, Mortgage-deed, or Policy of Insurance—If duty on such does not exceed Rs. 5—The duty with which such Bond, &c., is chargeable.</i>	
<i>Settlement</i> —The same duty as a Bond for the sum equal to the amount or value of the property—settled as set forth in such settlement.		<i>In any other case</i>	5 0
<i>Revocation of Settlement</i> .—The same duty as a Bond for a sum equal to the amount or value of the property concerned as set forth in the instrument of revocation but not exceeding ten rupees.		—Of any property under the Administrator General's Act 1874, Section 31..	10 0
<i>Share-warrant</i> to bearer issued under the Indian Companies Act.—One and a half times the duty payable on a conveyance for a consideration equal to the nominal amount of the shares specified in the warrant.		—of any trust property without consideration from one trustee to another trustee or from a trustee to a beneficiary—five rupees or such smaller amount as may be chargeable for transfer of shares.	
<i>Shipping Order</i>	0 1	<i>Transfer of Lease</i> by way of assignment and not by way of under-lease—The same duty as a conveyance for a consideration equal to the amount of the consideration for the transfer.	
<i>Surrender of Lease</i> —When duty with which lease is chargeable does not exceed Rs. 5 :—The duty with which such Lease is chargeable.		<i>Trust, Declaration of</i> —Same duty as a Bond for a sum equal to the amount or value of the property concerned, but not exceeding	15 0
<i>In any other case</i>	5 0	<i>Revocation of</i> —Ditto, but not exceeding	10 0
<i>Transfer of Shares</i> —One-half of the duty payable on a Conveyance for a consideration equal to the value of the share.		<i>Warrant for Goods</i>	0 4

WIRELESS TELEGRAPHY.

The annual report of the Indian Telegraph Department for 1915-16 states that the number of wireless stations in India and Burma has increased from 9 in 1910-11 to 19 in 1915-16. The number of messages dealt with in the latter year by the nine coast stations was 83,719.

Licences to Officers.—The Government of India have decided that the granting of licences to military officers in respect of wireless telegraph apparatus used for experimental purposes shall be regulated by the following general principles: (1) When an officer conducts experiments in wireless telegraphy in his official capacity at the expense of Government no licence is required, but only executive permission, which may be given so far as the Telegraph Department is concerned by the Director-General, Posts and Telegraphs.

(2) When an officer carries on experiments as a private individual at his own expense, he

must obtain a licence. If the approval of the military authorities is required to what he proposes to do, he should obtain such approval before the Director-General, Posts and Telegraphs, is approached. The licence will then be submitted by the Director-General, Posts and Telegraphs, for the sanction of the Government of India.

(3) With reference to the above, attention is drawn to the necessity for applying for licences to own and use wireless telegraphy apparatus or installations, experimental or otherwise. Applications for such licences will be submitted through the Chief of the General Staff and will contain particulars regarding the apparatus showing (a) system it is proposed to employ, (b) maximum range of signalling with applicant's own receiving apparatus, (c) power (current and voltage), (d) source of power.

Who's Who in India.

- ACHARIYAR, P. SIR RAJAGOPALA, K.C.S.I.**, (1920); C.I.E. Member of Madras Executive Council. *Educ.*: Madras University. Entered I.O.S., 1888. Diwan of Cochin, 1896-1902; Diwan of Travancore, 1907-14; Secretary to Government of Madras, 1914. *Address*: Madras.
- ADVANI, MOTIRAM SHOWKIRAM**, District Judge. Broach, since 1917. *b.* 12 October 1868. *m.* Margaret Annesley, daughter of the late Rev. Charles Voysey. *Educ.*: The Albert School and Presidency College, Calcutta. Barrister (Inner Temple), 1892; Practised in Karachi, 1892-1904; Assistant Judge, Hyderabad, 1904; Acted as District Judge, Hyderabad, 1905; Permanent District Judge, 1911. Served in Thana and Surat. *Address*: Broach.
- AFSUR-UL-MULK, AFSU-UD-DOWLA, AFSUR JUNG, MIRZA MAHOMED ALI BEG, KHAN BAHADUR, NAWAR, Lieut.-Coll.**: K.C.I.E. (1908); C.I.E. (1897); M.V.O.; Hon. A.D.C. to Nizam of Hyderabad; Commander, the Nizam's Regular Force, 1916; *t.* Aurangabad (Deccan); *o.s.* of late Mirza Vilayet Ali Beg. *Educ.*: Aurangabad: Ressaldar, Hyderabad Contingent; Commander, Golconda Brigade, since 1885; Hyderabad Imperial Service Troops, since 1893; (both of these he raised); Commander, Regular Troops, since 1897. Served in the Afghan War, 1879-1880; Black Mountain Expedition, 1888; China Expedition, 1900; received title of Khan Bahadur and Afsur Jung, 1884; and of Afsur Dowla, 1895; raised to Afsur-ul-Mulk, 1903. Hon. Col., 20th Deccan Horse; on Staff, Imperial Service Cavalry Brigade, Indian Expeditionary Force, Egypt, 1915; on Staff, Indian Cavalry Corps and A.D.C. to Sir John French, France, 1915-16. *Address*: Rahut Munzil, Hyderabad (Deccan).
- AGA KHAN, AGA SULTAN MAHOMED SHAH, G.C.I.E.** (1902); G.C.S.I. (1911); K.C.I.E. (1898); LL.D., Hon. Camb; *t.* 1875; Brilliant Star of Zanzibar, 1900, 1st Class; has many religious followers in East Africa, Central Asia and India; head of Ismaili Mahomedans; granted rank and status of first class chief with salute of 11 guns in recognition of loyal services during European War. *Address*: Aga Hall, Bombay.
- AHMAD, DR. ZIA UDDIN**, Principal, M.A.O. Coll., Aligarh. *b.* 1878. *Educ.*: Aligarh, Cambridge (M.A.), Gottingen (Ph.D.) and Paris. Member of Calcutta University Commn. *Address*: Aligarh.
- AIKMAN, DAVID WANN, C.I.E.** (1912), Superintending Engineer, Simla Imperial Circle. *b.* 8 December 1863. *Educ.*: Cooper's hill *m.* Marion Drummond Stewart, Sister of Sir Harry Stewart, 11th Bart. Joined P. W. D., 1885. Retd., 1918. Re-employed by Government of India, April 1919. *Publication*:—Roorkee treatise on water supply. *Address*: The Shrubbery, Simla.
- AINSCOUGH, THOMAS MARTLAND, O.B.E.** (1918). Trade Commissioner in India and Ceylon. *b.* 1886. *m.* Mabel, daughter of W. Lincoln of Ely, Cambs. *Educ.*: Manchester Gr. School; Switzerland and Manchester University. In business in China, 1907-12; Spl. Commissioner to the Board Trade in China, 1914; Secretary, Board of Trade Textile 1916. Secretary Empire Cotton Growing Committee, 1917. *Publication*. "Notes from a frontier." *Address*: McLeod House, Dalhousie Sq., Calcutta.
- AIYER, SIR P. S. SIVASWAMY, K.C.S.I.** (1915); C.S.I. (1912); C.I.E. (1908). Retd. Member, Executive Council, Madras. *b.* 7 February 1864. *Educ.*: S. P. G. Coll., Tanjore; Presidency College, Madras. Vakil (1885); Advocate General, Madras, 1907-12; Member of Executive Council, Madras, 1912-17; Vice-Chancellor, University of Madras, 1916-18; Vice-Chancellor of Benares Hindu University, 1918-19. *Address*: Sudharma, Edward Elliot's Road, Mylapore, Madras.
- ALWAR, H. H. RAJ RAJENDRA SRI SEWAI MAHARAJA, LT.-COL. SIR JEISINGHI VEERENDRA DEO, G.C.I.E.** (1919); K.C.I.E. (1911); K.C.S.I., Maharaja of: Hon. Lt.-Col. in army, 1915; *b.* 1882; S. father, 1892. *Address*: The Palace, Alwar, Rajputana.
- ANDERSON, ERIC OSWALD, C.B.E.** (1919), General Manager, Bullock Bros. & Co. Ltd., Rangoon. *b.* 24 July 1870. *Educ.*: Aldenham school, Herts. *Address*: Rangoon.
- ANDERSON, GEORGE, C.I.E.** (1920), M.A. (Oxon.). *b.* 15 May 1876; *m.* to Gladys Alice Morony. *Educ.*: Winchester College, University College, Oxford, Transvaal Education Department, 1902-1910; Indian Educational Service; Professor of History, Elphinstone College, Bombay; Assistant Secretary, Department of Education, Government of India; Secretary, Calcutta University Commissioner 1918-19. *Publications*: The Expansion of British India; British Administrations in India: Short History of the British Empire. *Address*: Armadale, Simla.
- ANKLIKER, LT.-COL. SIR APPAJIRAO SAHIB SITOLE, K.B.E.** (1919); C.I.E. (1913); Member of the Gwalior Government in Department of Revenue and Agriculture since 1918. *b.* 1874. *Educ.*: Belgaon. Pte. Secretary to the Maharajah of Gwalior, 1897. *m.* the youngest daughter of the late Maharajah Jijajirao Sahib Scindia of Gwalior. *Address*: Gwalior.
- ANNANDALE, (THOMAS) NELSON, B.A.** (Oxon.), D.Sc. (Edin.), F.L.S.; corresponding member of the Zoological Society of London, Director of the Zoological Survey of India, 1916; Superintendent of the Indian Museum and Secretary to the Trustees, 1906-16; *e.s.* of late Prof. Thomas Annandale. *Educ.*: Rugby; Edinburgh University; Balliol College, Oxford. *Address*: Indian Museum, Calcutta.

- ANSTEY, PERCY LEWIS, B. Sc. (Econ.);** London, 1910; Principal, Sydenham College of Commerce and Economics, *b.* 25 Feb. 1876. *m.* to Vera nee Powell (B. Sc. Econ. London). *Educ.*: Luisen Gymnasium, Berlin. Felsted School; St. Paul's School; University of Vienna; London School of Economics and Political Science; Business, 1910-11; Lecturer in Economics, University of Sheffield, 1911-14; Head of Economics Department, University of Bristol, 1914-18; Principal, Sydenham College, Bombay. *Publications*: The abuse of the Psychological Method in Sociology: A New Basis of Rating. *Address*: Dongarsi Road, Malabar Hill, Bombay.
- ARCHBOLD, W. A. J., M.A., LL.B.;** Principal of the Government College, Dacca, 2nd s. of Alfred Jobson, late of Darlington, and nephew of late James Archbold Pears Archbold; late scholar and prizeman of Peterhouse; late Principal of the Mahomedan Anglo-Oriental College, Aligarh. *Address*: Government College, Dacca.
- ARCOT, PRINCE OF, HON. SIR GHULAM MAHOMED ALI KHAN BAHADUR, G.C.I.E (1917); K.C.I.E. (1909).** *b.* 26 Feb. 1882; *s.* father, 1903. Premier Mahomedan nobleman of Southern India, being descended from the former Mussulman dynasty of the Nawabs of the Karnatic. *Educ.*: Newington Court of Wards Institution, Madras. Member of Madras Legislative Council, 1901-6; Member of the Imperial Legislative Council (Mahomedan Electorate) of the Madras Presidency, 1910-13; Member of the Madras Legislative Council by nomination, 1916. President, Madras Presidency Muslim League. *Address*: Amir Mahal, Madras.
- ARDEN-WOOD, WILLIAM HENRY HETON, C.I.E. (1913); M.A. (Oxon.), F.R.G.S.;** Hon. Fellow of Calcutta University; Principal of La Martiniere College, Calcutta, since 1892; *b.* 27 Nov. 1858; *s.* of late Rev. J. Wood, M.A. (Oxon.), Highfield, Wigan; *m.* 1893, Margaret Louisa, *s. d.* of E. E. Lewis, late B.C.S. *Educ.*: Manchester Grammar School; Christ Church, Oxford. Assistant Master, Grantham Grammar School, 1883-85; La Martiniere, Calcutta, 1885-89; Principal, Victoria College, Cooch Behar, 1889-92; 1st President, Calcutta University Teachers' Association, 1905; President, Anglo-Indian Association, 1913; Member, Bengal Legislative Council, 1917. *Address*: 11, London Street, Calcutta.
- ARMYTAG, MAJOR VIVIAN BARTLEY GREEN, I.M.S.;** Chev. of Legion of Honour (1916); Order of White Eagle of Serbia (1917); 1st Resident Surgeon, Presidency General Hospital, Calcutta. *b.* 14 August 1882. *Educ.*: Clifton College, London and Paris; Eden hospital, 1911-14. Served in France. *Publications*: Co-editor, 5th Ed. "Diseases and Management of Children in India, "Labour room clinics and aids to midwifery." *Address*: Presidency General Hospital, Calcutta.
- ASSAM, BISHOP OF, since 1915, RT. REV HERBERT PAKENHAM PAKENHAM-WALSH, D.D. (Dub.).** *b.* Dublin, 22 March 1871; 3rd son of late Rt. Rev. William Pakenham Walsh, Bishop of Ossory, and Clara Jane Ridley; *m.* 1916, Clara Ridley, *y. d.* of Rev. F. C. Hayes. *Educ.*: Chard Grammar School; Birkenhead School; Trinity College, Dublin; Deacon, 1896; worked as a member of the Dublin University Brotherhood; Chhota Nagpore, India, 1896-1903; Principal, S. P. C. College, Trichinopoly, 1904-07; Head of the S. P. G. Brotherhood, Trichinopoly—moved to Bangalore, 1907-14; *Address*: Shillong, Assam.
- ASTON, ARTHUR HENRY SOUTHCOTE, M.A. (Oxon.);** Chief Presidency Magistrate and Revenue Judge, Bombay; *b.* 4 July 1874; *m.* to Lilian, *d.* of the late Col. A. R. Savile. *Educ.*: Harrow School, Balliol College, Oxford. Joined Lincoln's Inn; called to the Bar; practised as a barrister, Bombay High Court, 1902; Public Prosecutor in Sind, 1906; Chief Presidency Magistrate, Bombay, 1906. *Publications*: Joint Editor, Starlings Indian Criminal Law (8th Edition). *Address*: Esplanade Police Court, Bombay.
- AYLING, SIR WILLIAM BOCK, KT. (1915);** Judge of the High Court of Judicature, Madras, since 1912; *b.* 30 August 1867; *s.* of Frederick William Ayling; *m.* 1891, Emma Annie Graham (*d.* 1912); *Educ.*: Weymouth College; Magdalene College, Cambridge. Entered I.C.S., 1886. *Address*: Madras.
- AZIZ-UD-DIN, MUNSHI, C.I.E., 1909; C.V.O., 1911;** Deputy Commissioner, Berar; Acting Hon. A. D. C. to King George during Indian tour when Prince of Wales. *Address*: Berar.
- BABER SHUM SHERE JUNG BAHADUR RANA, GENERAL SIR, K.C.I.E., (Hon.)** *er.* 1916; Nepalese Army; *b.* Katmandu, Nepal, 27 Jan. 1888; 2nd s. of Maharaja of Nepal; *m.* 1903, Deva Vakta Lakshmi Devi; Director-General Police Forces, Katmandu, since 1903; attached to the General Staff, Army Headquarters, India, as Inspector-General of the Nepalese Contingents on General Service in India, 1915. *Address*: Shingha Durbar and Baber Mahal, Katmandu, Nepal.
- BABINGTON, COL. DAVID MELVILLE, C.I.E., 1907; R.G.A.;** Superintendent of Cordite Factory, India; *b.* 22 April 1863; *m.* 1898, Violet Mary, *d.* of Col. Generalstreet, R.E., *Address*: Cordite Factory, Aruvankadu.
- BAGCHI, SATISCHANDRA, B.A., LL.D.,** Bar-at-Law; Principal, University Law College, Calcutta; *b.* Jan. 1882; *Educ.*: Santipur Municipal School; Calcutta; St. John's College, Cambridge, B.A., Calcutta University, 1901; B.A., LL.B., Cambridge and Dublin; LL.D., Trinity College, Dublin 1907; Fellow, Calcutta University, 1909; Tagore Professor of Law, 1915; called to Bar, Gray's Inn, 1907. *Address*: Principal's Quarters, Darbhanga Buildings, University Law College, Calcutta.
- BAIG, SIR ABBAS ALI, K.C.I.E., C.S.I., B.A., LL.D.,** late Statutory C.E. Joined the service 8 January 1882 as Dy. Educational Inspector, Hindustani Schools, Bombay; employed in Janjira State, March 1886 to March 1890; prob. under the native civil service rules, and Assistant Collector, 1st April 1890; on special duty in the Juna-

- gadh State, January to April 1893; offd. as 4th Presidency Magte, April 1893; appointed Oriental Translator to Government, June 1893 appointed Dewan of Junagadh State, July 1906 to 1910; Talukdari Settlemt. Officer, July 1906; Member of Council of State for India, June 1910; C.S.I., June 1912; LL.D., Glasgow, 1912; Commissioner of Income-tax, 1915-17; retired from Council of India, June, 1917: K.C.I.E. June, 1917.
- BAKEWELL, THE HONBLE JUSTICE MR. JAMES HERBERT, JUDGE', HIGH COURT, MADRAS, b. 10 May, 1863. m. Ada Beatrice Keeling. Educ.:** Merchant Tailor's School; University College, London. **Barrister (Lincoln's Inn). 1886. Practised at Chancery Bar; Advocate, Madras, 1895. Publications:** The Presidency Small Cause Courts Act. Practice in suits on mortgage and for partition. **Address:** Woodstock, Nungumbaukum, Madras.
- BALRAMPUR, MAHARAJA BAHADUR OF, SIR BHAGWATI PRASAD SINGH, K.C.I.E.;** Member of the Legislative Council of the U.P. of Agra and Oudh; Hon. Fellow of the University of Allahabad for life; Chairman, Municipal Board, Balrampur; Special Magistrate; *b. 19th July 1879; S. 1893. Address:* District Gonda, Oudh.
- BANATVALA, COL. HORMASJEE EDULJEE, C.S.I., 1917; I.M.S.,** Inspector-General of Civil Hospitals, since 1914; Member of Council of Chief Commissioner, Assam First Commission, 1884; military duty until 1893; served Burma, 1886-89; Lushai Expedition, 1882. **Address:** Shillong, Assam.
- BANERJEE, SURENDRANATH, B.A.;** Editor of the "Bengalee;" Professor of English Literature, Ripon College; *b. 10 Nov. 1848; m. 1867; Educ.:* Doveton College, Calcutta; University College, London. Entered I.C.S., 1871; left the service 1874; Professor of English Literature, Metropolitan Institution of Calcutta, 1875; founded Indian Association, 1876; founded Ripon College Calcutta, 1882; was twice President of the Indian National Congress; for eight successive years a Member of the Bengal Legislative Council; again elected 1913; Member of the Imperial Legislative Council, 1913. **Address:** Bengalee Office, Calcutta.
- BANERJI, ALBION RAJKUMAR, M.A., I.C.S., C.I.E., 1912; b. Bristol, 10 Oct. 1871; m. 1898, d. of Sir Krishna Gupta. Educ.:** Calcutta University; Balliol College, Oxford; M.A., 1892. Entered I.C.S., 1895; served as district officer in the Madras Presidency; Diwan to H. H. the Maharaja of Cochin, 1907-14; reverted to British service, 1915; Collector and District Magistrate, Cuddapah; services placed at the disposal of Government of India Foreign Department for employment as Member of the Executive Council of H. H. the Maharaja of Mysore, March 1910. **Address:** Bangalore.
- BARBER, CHARLES ALFRED, SC. D. (Cantab.), F.L.S.,** Sugar Cane Expert for India; *b. Wynberg, South Africa, 1860; s. of Rev. Wm. Barber; m. Edith Leather, d. of Rev. G. R. Osborne; one s. one d. Educ.:* Kingswood School, Bath; Bonn University; Christ's College, Cambridge (Scholar). Demonstrator and Lecturer at University College, London and Cambridge University; Superintendent of Agriculture, Leeward Islands; Professor of Botany, R.I.E. College, Cooper's Hill; Government Botanist, Madras. **Address:** Agricultural College, Coimbatore, S. India.
- BARIA, MAHARAWAL SHRI RANJITSINHJI MANSINHI, RAJA OF; b. 10 July 1886; one s. one d. Educ.:** Rajkumar College, Rajkot; Abbotsholm School, Derbyshire; Imperial Cadet Corps, Dehra Dun. Hon. A. D. C. to Governor of Bombay, 1913; **Address:** Baria, Rewa Kantha, Bombay.
- BARLOW, GEORGE THOMAS, C.I.E., 1915;** Chief Engineer and Secretary, Government Irrigation Branch, U. P.; *b. 11 March, 1865; s. of Rev. J. M. Barlow, Ewhurst Rectory, Guildford; m. 1891, A. S. Anthony; two s. two d. Educ.:* Haileybury; R.I.E., College. Appointed P. W. D., India, 1886. **Address:** Allahabad, U. P.
- BARNARDO, LT.-COL. FREDERICK ADOLPHUS FLEMING, M.A., B.Sc., M.B., 1899; F.R.C.S., M.R.C.P. (Edin.); C.B.E. (1919); C.I.E.,** Assistant Director of Medical Services, Embarkation Staff, Bombay, Indian Medical Service; *b. June 4, 1874; m. to Violet Kathleen Ann, 2nd daughter of the late Henry Teviot-Kerr, seventh son of the late Rev. Lord Henry Frances Teviot-Kerr; Educ.:* Edinburgh University. Served with the Rifle and Forfar Light Horse Imperial Yeomanry in South Africa, 1899-1902; entered Indian, Medical Service, 1902; Somaliland Campaign, 1903-1904. **Publications:** Many contributions to Medical publications, and the following monographs:—Surgical Shock Intestinal Stasis. The causation of the Onset of Labor, etc. **Address:** 9, Queen's Road, Bombay.
- BARNES, SIR GEORGE STAPYLTON, K.C.B. (1915), C.B. (1909);** Member of the Council of the Viceroy of India, since 1916; *b. Umballa, India, 8 February, 1858; e.s. of late George Carnac Barnes, C.B., formerly Foreign Secretary in India, and Margaret Diana, d. of late Major Henry Chetwynd-Stapylton; m. Sybil de Gournay, d. of late Charles Buxton, M.P., of Foxwarren, Cobham, Surrey; two s. one d. Educ.:* Eton; University College, Oxford. Barr. Inner Temple, 1883; assisted the late Lord Russell of Killowen in his work at the bar, 1883-1893; Counsel to Board of Trade in Bankruptcy matters, 1886; Official Receiver in Companies Liquidation, 1893; Senior Official Receiver, 1896; Comptroller of the Companies Department of the Board of Trade, 1904-11; Comptroller General of the Labour Department of the Board of Trade, 1911-13; Second Secretary, Board of Trade, 1913; Joint Permanent Secretary, 1915; **Address:** Simla and Delhi; Foxholm, Cobham, Surrey.
- BARNES, HERBERT CHARLES, C.I.E. (1919).** Indian Civil Service. *b. 30 May 1870. Educ.:* Westminster School. Christ Church, Oxford M.A. **Address:** Silchar, Cachar.
- BARODA, H.H. MAHARAJA GAEKWAR SIR SAYAJI RAO III., G. C. S. I. (1881); G.C.I. E. (1919)** *b. 10 March, 1863; m. 1st, 1881, Chinna*

- bai Maharani: 2nd, 1885, Chinnabai Maharani II, C.I.; three s. one *d. Educ.*: Maharaja's School, Baroda. Succeeded, 1875. Invested with powers, 1881. *Address*: Baroda.
- BARRATT, MAJOR-GENERAL WILLIAM CROSS**, C.B., 1911; D.S.O.; Indian Army; Commdg. 16th Indian Division; *b.* 2 June, 1862; 3rd s. of late James Barratt, of Hanslope, Bucks; *m.* 1907, Katherine Mathilde Goldsmith, formerly of Betton Hall, Market Drayton. *Educ.*: Bedford Grammar School. Entered Army 1883, Served Soudan Expedition, 1885; Zhoob Valley Expedition, 1890; Waziristan, 1894-95; East Africa, 1896, Uganda, 1897-98; China, 1901, N. W. Frontier, India; Darwesh Khel Wazirs Expedition. *Address*: Lahore Cantonment.
- BARRETT, LIEUT.-GENERAL SIR ARTHUR ARNOLD**, (1903) K.C.B., (1915) K.C.V.O., (1912); C.B., (1903); Commanding Northern Command; *b.* 3 June 1857; 3rd s. of late Rev. Alfred Barrett, D.D.; *m.* 1st., 1894, Mary (*d.* 1897), *d.* of James Hays of Fowey, Cornwall; 2nd 1907 Ella, *d.* of H. Lafone, 59 Onslow Square, S. W.; one *d.* Entered Army, 1875; Captain, 1886; Major 1895; Lieut.-Col. 1901; served Afghan War, 1879-1880; march to Kandahar and battle of Kandahar; Hazara, 1888; 2nd Miranzai Expedition, 1891; Hunza Nagar Expedition, 1891; N. W. Frontier, India, 1908; Bazar Valley Expedition; Mohmand Expedition; Adj. Genl. in India, 1909-12; Divisional Commander, Poona, 1912-14. *Address*: Rawal Pindi.
- BARRON, CLAUD ALEXANDER**, C.I.E. (1911), F.R.G.S.; District and Sessions Judge, Punjab, since 1914; *b.* 22 December, 1871; s. of Col. W. Barron, B.S.C.; *m.* 1912, Ida Mary, *e. d.*, of Col. R. H. Ewart; one s. *Educ.*: Grammar School and University, Aberdeen; Clare College, Cambridge. Entered I.C.S., 1890; Chief Secretary, Punjab Government, 1912-16. *Address*: Jullundur, Punjab.
- BARTHE, RT. REV. JEAN MARIE**; Bishop of Paralais since 1914; *b.* Lesignan, Tarbes, 1849. *Educ.* St. Pe. Seminary. Bishop of Trichinopoly, 1890-1914. *Address*: Trichinopoly, Madras Presidency.
- BASU, SIR KAILAS CHUNDER, RAI BAHADUR**, KT., *cr.* 1916, C.I.E., 1910; Kaiser-i-Hind, 1909; Fellow, Calcutta University; Vice-President, Indian Medical Congress; Fellow, R. Institute of Public Health; Member, British Medical Association; Member of the Corporation of Calcutta and Hon. Presidency Magistrate; 2nd s. of late Babu Madhusan Basu. *Address*: 1, Sukea Street, Calcutta.
- BEACHCROFT, HON. MR. JUSTICE CHARLES PORTEN**; Puisne Judge, High Court, Calcutta, since 1915; *b.* 13 March 1871; 4th son of late Francis Porten Beachcroft, Bengal Civil Service; *m.* Elizabeth, *d.* of late A. E. Ryles. *Educ.*: Rugby; Clare College, Cambridge. Passed Indian Civil Service, 1890; Assistant Magistrate and Collector, Bengal, 1892; Officiating District and Sessions Judge, 1900; District and Sessions Judge, 1906; Officiating Judge, High Court, Calcutta, 1912. *Address*: 4, Little Russell Street, Calcutta.
- BEADON, LT.-COL. HENRY CECIL**, C.I.E. (1919) Deputy Commissioner, Delhi. *b.* 28 November 1869. *m.* 1st Marion A. 2nd Dorothy A. Brown, both being daughters of H. E. Brown of Barton Hall, S. Devon. *Educ.*: Cheltenham. Military employ, 1890-95, since when in Civil employ in the Punjab, N. W. F. Province and Delhi. *Address*: Delhi.
- BEDI, SIR BABA GARBAKSH SINGH**, KT., *Cr.* 1916; C.I.E., 1911; Hon. Extra Assistant Commissioner in the Punjab. *Address*: Kallar, Punjab.
- BEER, BIKRAM SINGH, RAJKUMAR**, HON. LT.-COL., C.I.E.; A. D. C. to the Viceroy 1906; Officer Commanding Sirmour Imperial Service Sappers and Miners; also attached to 1st P.W.O. Sappers and Miners. Served in the Tirah expedition, 1897-98; *Address*: Sirmour State, Punjab.
- BELL, CHARLES ALFRED**, C.M.G., 1915; I.C.S.; Political Agent for Tibet, Bhutan and Sikkim; *b.* 31 October, 1870; *e. surv. s.* of Henry Bell, I.C.S., and Anne, *d.* of George Dumbell, banker, of Douglas, Isle of Man; *m.* Cashie Kerr, *d.* of David Fernie, shipowner of Warrerside, Blundellsands, Lancashire; one s. one *d. Educ.*: Winchester; New College, Oxford. Joined Bengal Civil Service, 1891; conducted exploratory Mission in Bhutan in 1904, and political mission to that country in 1910, concluding a treaty, by which the foreign relations of Bhutan were placed under the British Government; on political duty in Tibet, Bhutan and Sikkim in 1904-05, 1906 and since 1908; was employed on the Tibet Conference between Great Britain, China and Tibet, 1913-14. *Publications*: Manual of Colloquial Tibetan and other Tibetan works. *Address*: Gangtok, Sikkim.
- BELL, COLONEL GEORGE JAMES HAMILTON**, C.I.E., 1914; M.B.C.M., Edinburgh; I.M.S., Inspector General of Civil Hospitals, Bihar and Orissa; *b.* 28 February, 1861; *s.* of Robert Bell, advocate; *m.* 1890, Violet Helen Mary, *d.* of Lestock Reid Forbes; one s. two *d. Educ.*: Edinburgh Academy and University. *Address*: Ranchi.
- BELL, SIR NICHOLAS DODD BEATSON**, K.C.I.E. (1919); C.I.E. (1915) of Ch. Commissioner of Assam *b.* 19 June, 1867. *Educ.*: Edinburgh Academy and Balliol College, Oxford. *m.* Jeannie Arbuthnott, daughter of John Campbell Arbuthnott, C.I.E. (I.C.S., Assam). Entered the I.C.S. and served in Bengal, E. Bengal and Assam, and Assam. *Address*: Shillong.
- BELL, ROBERT DUNCAN**, C.I.E. (1919); Director of Industries, Bombay Presidency and Controller of Munitions, Bombay Circle. *b.* 8 May, 1878. *Educ.*: Heriot's School, Edinburgh, and Edinburgh University, *m.* Jessie, *d.* of D. Spence, Esq. Appointed, I.C.S. Bombay, 1902. Secretary, Indian Industrial Commission, 1916-17, Controller, Industrial Intelligence; 1917-18. Controller, Oils and Paints, 1918-19. *Address*: C/o. Grindlay & Co., Bombay.
- BENARES, H. H. SIR PRABHU NARAYAN SINGH**, MAHARAJA BAHADUR OF, G.C.I.E. (1898); *b.* 26 November 1855; S. uncle 1889, *Address*: Ramnagar, Benares.

BENN, LT.-COL. ROBERT ARTHUR EDWARD, C.I.E., 1904, F.R.G.S.; Indian Army; Resident at Jaipur, Rajputana, since 1915; *b.* 4 February, 1867; *c.s.* of late Charles Edward Benn; *m.* 1898, Edith Annie Fraser, 3rd *d.* of late Maj.-Gen. Neville Parker (retired), Bengal Army; one *s.* one *d.* *Educ.*: Merchant Taylors' School, Great Crosby; Heidelberg Coll., Germany; R. M. C. Sandhurst. Entered Army, 1887; Appointed to the Indian Political Department, 1895; *Address.*: Jaipur, Rajputana.

BENZIGER, RT. REV. ALOYSIUS MARY, O.C.D., Bishop of Quilon since 1905; *b.* Einsiedeln, Switzerland, 1864. *Educ.*: Frankfurt; Brussels; Downside. Came to India, 1890; Bishop of Tabar, 1900; *Address.*: Bishop's House, Quilon, Madras.

BESANT, ANNIE; President, Theosophical Society; author and lecturer on religious, philosophical and scientific subjects; *b.* 1 October, 1847; *d.* of William Page Wood and Emily, *d.* of James Morris; *m.* 1867, Rev. Frank Besant (*d.* 1917), Vicar of Sibsey, Lincolnshire; legally separated from him, 1873; one *s.* one *d.* *Educ.*: privately in England, Germany, France; Joined the National Secular Society, 1874; worked in the Free Thought and Radical Movements led by Charles Bradlaugh, M.P.; was co-editor with him of the National Reformer. Member of the London School Board, 1887-90. Joined the Theosophical Society in 1889; became a pupil of Mme. Blavatsky; elected its President in 1907. Founded 1898 the Central Hindu College at Benares; 1904, the Central Hindu Girls' School, Benares; is working to found the University of India. *Address.*: Adyar, Madras.

BEVILLE, LT.-COL. FRANCIS GRANVILLE C.I.E., 1908; Resident, Gwalior, since 1914; *b.* 24 March, 1867. Lient N. Staffs. Regiment 1886; Indian Staff Corps, 1888; Captain, Indian Army, 1897; Major, 1904; Lt.-Col., 1912; Acting Consul, Muscat, 1896; Consul, 1896-97; Political Agent, Bundelkhand, 1900-4; Bhopawar, 1905-12. *Address.*: Gwalior.

BHABHA, HORMASJI JEHANGIR. *b.* 27 June, 1852. *Educ.*: Elphinstone College and in England. Senr. Fellow, Elphinstone College, 1874-76, Vice-Principal and Professor of Logic and Ethics, Central College, Bangalore, 1876; Principal Maharaja's College, Mysore, 1884. *Educ.*: Secretary to Government, Mysore, 1890; Inspector General, Education, Mysore, 1895-1909; Munir-ul-Tahim (Mysore), 1909. *Address.*: 31, Pedder Road, Bombay.

BHAGWATI, PRASADH SINGH, MAHARAJA SAG OF BALRAMPUR, K.C.I.E., Cr. 1906; *s.* 1896. *Address.*: Gonda, Oudh, India.

BHANDARKAR, SIR RAMKRISHNA GOPAL, K.C.I.E. (1911); C.I.E. (1889); M.A., Hon. LL.D., Bombay and Edinburgh; Hon. Ph. D., Calcutta; Professor of Oriental Languages, Deccan College, Poona, 1882-93; *b.* 1837; *m.* two *s.* one *d.* *Educ.*: Ratnagiri Government English School; Elphinstone College, Bombay, 1847-58. Headmaster of High Schools, 1864-68; Professor of Sanskrit,

Elphinstone College, Bombay, 1869-1881. Fellow, and for two years Vice-Chancellor of Bombay University; Fellow of Calcutta University; nominated to membership of Viceroy's Legislative Council in connection with Lord Curzon's Educational Reforms, 1903; Member of Bombay Legislative Council, 1904-08; a leader of Hindu social and religious reform movements; Dakshina Fellow, 1859-64. *Publications.*: First and Second Books of Sanskrit; Early History of the Deccan; Sanskrit and the Derived Languages; article on Vaisnavism, Saivism and minor religious systems, in the Encyclopaedia of Indo-Aryan Research; edited Bhavabhuti's *Malati-Madhava*, and has written six reports on Sanskrit MSS., philological and antiquarian articles and essays in the Transactions of learned societies. *Address.*: Poona.

BHARATPUR, MAHARAJA OF, H. H. SRI MAHARAJA BRAJENDRA SAWAI KISHAN SINGH BAHADUR JUNG; *b.* 4 October, 1899; *s.* of Maharaja Ram Singh; *m.* sis. of H. H. the Raja of Faridkot. *Educ.*: Mayo College, Ajmere; and Wellington. *Address.*: Bharatpur, Rajputana.

BHATAWADEKAR, SIR BHALCHANDRA KRISHNA, KT. (1900); L.M.; J.P.; Medical Practitioner, Bombay, since 1885; *b.* 19 February, 1852; *s.* of Krishna Shastri Bhatawadekar and Rakhmabai; *m.* Savitribai; three *s.* two *d.* *Educ.*: Elphinstone High School; Grant Medical College, Bombay. Additional Member of Legislative Council, 1897-1899; Legislative Council 1901; Member of the Improvement Trust; President of the Indian Temperance Association and of the Temperance Council; President of the 14th Bombay Provincial Conference, 1907; Syndic in Medicine, 1912-13. *Address.*: Girgaon, Bombay.

BHAVNAGAR, H. H. MAHARAJA SIR BHAVSINHJI TAKHTASINHJI, K.C.S.I., MAHARAJA OF; *b.* 26 April, 1875; *s.* father (Sir Takhtasinhji Jawsatsinhji, G.C.S.I.), 1896; *m.* 1905, H. H. Maharani Nandkuverba, C.I., who died 1918; two *s.* one *d.* *Address.*: Bhavnagar, Kathiawar.

BHOPAL, H. H. NAWAB SULTAN JEHAN BEGUM, BEGUM OF C.I., *cr.* 1911; G.C.S.I., *cr.* 1910; G.C.I.E., *cr.* 1904; *b.* 9 July 1858; *s.* mother (H. H. Nawab Shah Jehan Begum, G.C.S.I., C.I.), 1901; *m.* 1874, Ahmed Ali Khan, three *s.* Eighth in lineal descent from the famous Dost Mahomed Khan, founder of the dynasty. *Address.*: Bhopal, Central India.

BHORE, JOSEPH WILLIAM, B.A. (Bombay) *b.* 6 April 1879. *m.* to Margaret Wilkie Stott, M.B., Ch.B., (St. Andrews). *Educ.*: at Deccan College, Poona; University College, London; Corpus Christi College, Oxford; Assistant Collector; Under-Secretary to the Madras Government; Dewan of Cochin. *Address.*: Trichur, Cochin State.

BIKANER, MAHARAJA OF, COL. H. H. RAJ-RAJESHWAR NARENDRA SHIROMANI SRI SINGH BAHADUR, G.C.S.I., *cr.* 1911; G.C.I.E., *cr.* 1907, K.C.S.I., *cr.* 1904; K.C.I.E., *cr.* 1901; A. D. C.; Hon. LL.D., Cambridge; *b.* 3 October 1880; succeeded 1887; two sons,

- one *d.* Invested with full ruling powers, 1898; granted Hon. Commission of Major in the British Army, 1900, and attached to 2nd Bengal Lancers; served with British Army in China in command of Bikaner Camel Corps, 1901; served European war, 1914-15; a representative of India at Imperial War Conference, 1917 and at the Peace Conference; Freeman of City of London. *Address*: Bikaner, Rajputana.
- BILGRAMI, SYED HOSSAIN, NAWAB, IMADUL MULK, BAHADUR, C.S.I.**, 1908; *b.* Gya, 18 October, 1844; *s.* of Syed Zainuddin Hossain Khan Bahadur of the Uncovenanted Civil Service, Bengal; *m.* 1st, 1864, wife died 1897; *m.* 2nd, Edith Boardman, I.S.A., (London), M.D.; four *s.* one *d.* *Educ.*: Presidency College, Calcutta. Professor of Arabic, Canning College, Lucknow, 1866-73; Private Secretary to H. E. Sir Salar Jung till his death; Private Secretary to H. H. the Nizam; Director of Public Instruction of H. H. the Nizam's Dominions; Member of the Legislative Council, Member of the Universities Commission, 1901-2; retired 1907; Member of Council of Secretary of State for India, 1907-09; *Publications*: Life of Sir Salar Jung; Lectures and addresses; (in collaboration) Historical and Descriptive Sketch of His Highness the Nizam's Dominions, 2 vols. *Club*: United Service, Secunderabad.
- BILIMORIA, ARDASHIR JAMSETJEE**, Director, Tata Sons Ltd. *b.* 18 September 1864. *Educ.*: Chandanwady High School and Elphinstone College, Bombay. Joined Messrs. Tata, in 1884. *Address*: Taj Mahal Hotel, Bombay.
- BINGLEY, MAJOR-GENERAL ALFRED HORSFORD, C.B.**, 1915; *C.I.E.*, 1909; *b.* 28 May 1865; *s.* of late Peregrine Taylor Bingley; *m.* 1893, Mabel, *e. d.* of late Col. G. A. Way, C.B.; one *d.* *Educ.*: Kensington School, R.M.C., Sandhurst. Lieut. Leinster Regiment, 1885; Captain, Indian Army, 1896; Deputy Adjutant-General, Headquarters Staff, India, 1914; Sec. Army Department, Government of India, 1916; served in Burma, 1891-92, and in China, 1900; Gold Medal United Services Institution of India, 1896. *Publications*: Series of Handbooks on the Classes recruited in the Indian Army. *Address*: Simla.
- BINNING, SIR ARTHUR WILLIAM, K.T.**, (1916). Merchant in Rangoon; *b.* 5 August 1861; *s.* of Robert Binning, Glasgow; unmarried. *Educ.*: Glasgow Academy. *Address*: Rangoon; Burma.
- BIRKETT, SIR THOMAS WILLIAM, K.T.**, 1918. Merchant, Killick Nixon & Co., Bombay and Calcutta. *b.* 11 March 1871; *m.* to Dorothy Nina Forbes. *Educ.*: Cheltenham College, Chairman, Bombay Chamber of Commerce, 1915-16; Additional Member, Bombay Governor's Council, 1914; Additional Member, Viceroy's Council, 1915-16. Sheriff of Bombay, 1917. *Address*: Pali Hill, Bandra, Bombay.
- BIRLEY, LEONARD, C.I.E.**, 1914; Revenue Secretary to Government of Bengal, since 1915; *b.* 30 May 1875; *s.* of late Arthur Birley; *m.* 1908 Jessie Craig, *d.* of late Maxwell Smith, Hurslingpur, Tirhoot, India; one *s.*
- one *d.* *Educ.*: Uppingham; New College, Oxford. Entered I.C.S., 1897; Joint Magistrate and Deputy Collector, 1907; Magistrate and Collector, 1911. *Club*: United Service, Calcutta.
- BLACK, BRIG.-GENERAL WALTER CLARENCE, C.I.E.** (1919); Mil. Secretary to the C-in-C. since October, 1919. *b.* 29 January 1867. *Educ.*: Epsom College and R. M. C., Sandhurst. *m.* Miss Hope Gordon Anderson, Derbyshire Regiment, 1888. Transferred to Indian Army, 1890. Commanded Defended Part of Madras, 1917-18 Comdt. first Indian Cadet College. *Address*: Army Head Quarters, India.
- BLAIR, ANDREW JAMES FRASER**, Statesman Editorial staff, Calcutta; Founded the Eastern Bureau, Limited, Calcutta, 1912; late Editor and Managing Director, The Empire, Commerce, The Empire Gazette (daily and weekly newspapers published in Calcutta); *b.* Dingwall, Ross-shire, 30 September, 1872; *y. s.* of late Andrew Blair, Rector, Dingwall Burgh School, and Mary Ann Campbell, *d.* of late Thomas Duff, Glasgow; *m.* 1900, Constance, *e. d.* of Thomas Ibbotson; one *s.* one *d.* *Educ.*: Glasgow High School. Engaged in journalism, since 1890; *Address*: 6, Chowringhee, Calcutta.
- BLENKINSOP, BRIG.-GENERAL LAYTON JOHN D.S.O.**, 1898, F.R.G.S.; Director, Veterinary Services in India; *b.* 27 June 1862; 3rd son of Lieut.-Colonel William Blenkinsop and Elizabeth, *d.* of William Sandford; *m.* 1905, Ethel Alice, *d.* of John Wells, J.P., Booth Ferry House, Goole, *Educ.*: King's School, Canterbury; Royal Veterinary College, London. Entered A. V. Department, 1883; Punjab Government and Professor, Lahore Veterinary College, 1891-93; S.V.O., for British Troops, Soudan Expedition, 1898; Senior Veterinary officer in Egypt, 1896-99; served South Africa 1899-1902 and S.V.O., Remounts in South Africa to December 1902. *Address*: Army Headquarters, India. *Club*: Junior United Service.
- BLENKINSOPP, EDWARD ROBERT KAYE, C.I.E.** (1911); *b.* 15 May 1871; *s.* of Col. Blenkinsopp; *m.* Florence Edith, *d.* of late Sir Stanley Ismay, K.C.S.I., three *s.* *Educ.*: St. Paul's School; Christ's College, Cambridge. Entered I.C.S., 1890; Settlement Officer, 1897; Deputy Commissioner, 1902; Kaiser-i-Hind Medal, 1903; Commissioner of Excise, 1906; Chief Secretary to Chief Commissioner, 1912-13. *Address*: Nagpur, C. P.
- BOLTON, HORATIO NORMAN, C.I.E.** 1916; Deputy Commissioner, N. W. Frontier Province, since 1912, *b.* 1 Feb. 1875; *m.* 1911, Ethel Frances, *d.* of late Captain J. C. H. Mansfield Castle Wray, Co. Donegal; *Educ.*: Rossall; Corpus Christi College, Oxford (B. A.). Entered I.C.S., 1897; Deputy Commissioner, Dera Ismail Khan, 1904; Kohat, 1909; Sessions Judge, Peshawar, 1910-11; Political Agent, Dir, Swat, and Chitral, 1911-12. *Address*: Peshawar.
- BOMBAY, BISHOP OF**, since 1908; RT. REV. EDWIN JAMES PALMER; *o. s.* of late Archdeacon Palmer of Oxford, and nephew of 1st Lord Selborne; *m.* 1912, Hazel, *y. d.* of Col. E.

- H. Hanning-Lee, Bighton Manor, Alresford. *Educ.*: Winchester and Balliol Coll., Oxford. Ordained, 1896; Fellow, Balliol College, 1891; Tutor, 1893; Chaplain, 1896; Examining Chaplain to Bishop of Southwell, 1899-1904; to Bishop of Rochester 1904-05; to Bishop of Southwark, 1905-08. *Address*: Bishop's Lodge, Malabar Hill, Bombay.
- BOSANQUET, SIR OSWALD VIVIAN, K.C.S.I., 1919; C.I.E., 1910; C.S.I., 1914; Agent to Governor-General, Central India, since 1913. *b* 5 April 1866; *m*. 1886 Alys *d.* of Admiral Derriman. *Educ.*: Clifton College; New College, Oxford. Joined Indian Civil Service, 1887; Indian Political Department, 1890; served in Hyderabad and Rajputana; acting Under-Secretary to Govt. of India, Foreign Dept., 1895 to 1898; Political Agent, Bhopawar, 1899; Resident at Indore, 1903; Resident at Baroda; 1909; special duty, Foreign Dept., 1911-13. *Address*: Indore.
- BOSE, SIR BIPIN KRISHNA, K.C.I.E. (1920); Kt. *cr.* 1907; C.I.E., 1898; M. A.; Government Advocate in the Central Provinces; *b*. 1857. *Address*: Nagpur C. P.
- BOSE, SIR JAGADIS CHANDRA Kt. *cr.* 1917; C.I.E. 1903; C.S.I. 1911; M.A. (Cantab.), D. Sc. (Lond.); Professor Emeritus of the Presidency College, Calcutta; Founder Director of Bose Research Institute; *b*. 30 Nov. 1858; *Educ.*: Calcutta; Christ's College, Cambridge; Delegate to International Scientific Congress, Paris, 1900; scientific member of deputation to Europe and America, 1907 and 1914. Published numerous books on the physiology of plants. *Address*: Bose Institute, Calcutta.
- BOURNE, SIR ALFRED GIBBS, K.C.I.E. *cr.* 1913; C.I.E., 1908; F.R.S., F.L.S., C.M.Z.S.; Director of the Indian Institute of Science, Bangalore; *b*. Lowestoft, 8 Aug. 1859; *m*. Emily Tree Glashier, 1888; *Educ.*: University College, School; Royal School of Mines; University College, London. D.Sc. London; Fellow of University College, London; President of the Faculty of Arts in the University of Madras. Assistant to E. Ray Lankester, 1879-85; appointed to Madras, 1885; Registrar of the Univ. of Madras, 1891-1899; Director of Public Instruction, Madras, Commissioner for Government Examinations and Additional Member of the Council of Fort St. George, 1903-14. *Address*: Hebbal, Bangalore.
- BRADSHAW, WILLIAM JOHN, C.I.E. (1919); Managing Director, Messrs. Walter Locke & Co., Calcutta. *b*. 20 June 1864. *Educ.*: Birmingham. *m*. Salome, *d.* of A. C. Blake, of Nailsworth. *Address*: 4 Esplanade Road, Calcutta.
- BRAY, DENYS DE SAUMAREZ, C.B.E., 1919, C.I.E., 1917; I.C.S.; B.A.: Dep. Sec. to Government of India Foreign and Political Dept.; Assist. to Agent to Governor-General in Baluchistan since 1912. *Educ.*: Blundell's School, Tiverton; Balliol College, Oxford. Entered I.C.S., 1898; Census Superintendent, Baluchistan, 1910. *Address*: Quetta, Baluchistan.
- BRAY, SIR EDWARD HUGH, Kt., *cr.* 1917; Senior Partner, Gillanders, Arbuthnot & Co. President, Bengal Chamber of Commerce; Member of Imperial Legislative Council; Controller of Contracts, Army Headquarters. *b*. 15 Apr. 1874; *m*. 1912, Constance, *d.* of Sir John Graham, 1st Bt. *Educ.*: Charterhouse; Trinity College, Cambridge. *Address*: Gillander House, Calcutta.
- BROACHA, SIR SHAPURJI, Kt. *b.* at Broach 1846; Mill-owner and Agent, Partner in Tullockchand and Shapurji, Brokers, Sheriff of Bombay, 1911. Member of the R. Commission on Indian Finance and Currency, 1913. A distinguished philanthropist. *Address*: Bombay.
- BROWN, PERCY, A.R.C.A. 1898; Indian Educational Service, 1899; Principal, Government School of Art, Calcutta, since 1909; at Birmingham, 1872; *m*. 1908, *d.* of Lt.-Col. Sir Adelbert Talbot, K.C.I.E.; *Educ.*: Edward VI. Grammar School and School of Art, Birmingham. Principal, Mayo School of Art and Curator, Museum, Lahore, 1899-1909; on deputation, Assistant Director, Art Exhibition, Delhi Durbar, 1902-03; officer-in-charge Art Section and Trustee, Indian Museum, 1910. *Address*: 28, Chowringhee, Calcutta.
- BUCHANAN, WALTER JAMES, C.I.E. 1917; M.D.; Lt.-Col., Indian Medical Service. Editor of the Indian Medical Gazette, Calcutta since 1899; Inspector-General of Prisons, Bengal Presidency, since 1902; *b*. Londonderry, 12 Nov. 1861; *m*. Lillian Edith (*d.* 1916) *d.* of late F. Simpson Pyrne; *Educ.*: Foy's College, Londonderry; Trinity College, Dublin. Entered I.M.S., 1887; took part in Hazara Expedition, 1888; Lushai Expedition, 1890; Manipur Field Force, 1891 (medal and clasp); entered Civil Medical employ, Bengal, 1892; Civil Surgeon, Bengal Superintendent, Central Jails, Bhagalpur and Alipur. *Address*: The Bengal Secretariat Calcutta.
- BUCK, EDWARD JOHN, O.B.E. (1918); C.B.E. (1918), Reuter's Agent with Government of India and Director, Associated Press of India; Vice-Chrm. Alliance Bank of Simla. *b*. 1862. *m*. Annie Margaret *d.* of General Sir A. Jennings. *Educ.*: Hurstpierpoint. Was in business in Australia. Assistant and Joint Secretary, Countess of Dufferin's Fund for 28 years. Honorary Secretary, Executive Committee, "Our Day" in India, 1917-18. *Publication*: "Simla, past and present. *Address*: Northbank, Simla.
- BUNBURY, MAJOR-GENERAL WILLIAM EDWIN C.B. 1911; G.O.C. 2nd (Rawal Pindi) Division, since 1916; *b*. Clonfert, 5 April 1858; of late Bishop of Limerick; *m*. 1893, *m*. Mary, *d.* of Francis Gate, Cheltenham. *Educ.*: St. Columba's College, Rathfarham. Entered Army 1878; Col. 1908; passed Staff College, D.A.G. Northern Army India, 1908; served Afghan War, 1880 (medal); Mahsud-Wazir Expedition, 1881; Isazal Expedition, 1892; Chitral, 1895 (despatches, medal and clasp); Waziristan, 1901, 1902 (despatches, clasp); Commanded Kohat Brigade, May to Nov. 1912; Quartermaster-General in India, 1912-16. *Address*: Rawal Pindi.

- BUNDI, H. H. MAHARAO RAJA, SIR RAGHU SINGHJI BAHADUR, G.C.S.I., 1919; K.C.S.I., cr. 1897, G.C.I.E. cr. 1900, G.C.V.O. cr. 1911; b. 1888. S. 1889. Address:** Bundi, Rajputana.
- BURDEN, LT.-COL. HENRY, C.I.E. 1911; F.R.C.S., I.M.S.; Residency Surgeon, Nepal, b. 26 April 1867; unmarried. Educ.:** home. Entered St. Thomas Hospital, London, 1886; entered Indian Medical Service, 1894; served Relief of Chitral (medal and clasp): North-West Frontier, 1897-98 (two clasps). *Address:* Nepal.
- BURDWAN, HON. SIR BIJAY CHAND MAHTAB; MAHARAJADHIRAJA BAHADUR OF, K.C.S.I.; cr. 1911; K.C.I.E., cr. 1909; I.O.M., cr. 1909; F.R.G.S., F.R.S.A., F.R.C.I., F.N.B.A., M.R.A.S.; b. 19 Oct. 1881; a Member of 3rd class in Civil Division of Indian Order of Merit for conspicuous courage displayed by him in the Overtown Hall, Calcutta, 7 Nov. 1908; adopted by late Maharajadhiraja and succeeded, 1887, being installed in independent charge of zamindari, 1903; m. 1897 Radharani (Lady Mahtab) of Lahore; a Member of Imperial Legislative Council 1909-12; Bengal Legislative Council since 1907; Trustee of the Indian Museum, 1908; Trustee of the Victoria Memorial, Calcutta, since 1914. *Heir:* Maharajadhiraja Kumar Uday Chand Mahtab, b. 14 July 1905. *Address:* The Palace, Burdwan; Bijay Manzil, Alipore, Calcutta.**
- BURN, RICHARD, C.S.I., 1917; Magistrate and Collector, United Provinces, since 1918; b. Liverpool, 1 Feb. 1871; m. 1899, Grace Irene Cargill; Educ.:** Liverpool Institute; Christ Church, Oxford. Entered Indian Civil Service, U. P., 1891; Superintendent, Census, and subsequently Gazetteer, 1900; Editor, Imperial Gazetteer of India, 1905. *Address:* Allahabad.
- BURNHAM, JOHN CHARLES, C.S.I. 1911; F.I.C., F.C.S.; Manager and Chemist, Cordite Factory, Aruvankadu. Educ.:** Victoria University, Manchester; served on Sir F. Abels' special committee on explosives, 1888-91; Chemist, Experimental Cordite Factory, Kirkee, 1894. *Address:* Cordite Factory, Aruvankadu.
- BUTLER, SIR (SPENCER) HARCOURT, K.C.S.I. cr. 1911; C.S.I., 1909; C.I.E., 1901; I.C.S.; Lieut.-Governor of U. P. of Agra and Oudh, since 1917; b. 1 Aug. 1869; m. 1894, Florence d. of F. Nelson Wright; Educ.:** Harrow; Balliol College, Oxford. Served as Secretary to Famine Commission; Financial Secretary to Government; Director of Agriculture; Judicial Secretary to Government; Deputy Commissioner, Lucknow; Foreign Secretary to the Government of India; late Member of the Executive Council of the Governor-General; Lieut.-Governor of Burma, 1915-17. *Address:* Lieutenant-Governor's Camp, United Provinces.
- BUTTERWORTH ALAN, C.S.I. 1915; Chief Secretary, Government of Madras, since 1914; Officiating 1st member, Board of Revenue, 1917. m. 1897, Alice Erksine, d. of Maj.-Gen. George Colclough, R.H.A.; Educ.:** Elizabeth College, Guernsey, Wren's; Balliol College, Oxford. Entered I.C.S., 1883; served in various executive, judicial and administrative capacities in the Madras Presidency; also served in a judicial capacity in the Bombay Presidency and the Central Provinces. *Address:* Secretariat, Madras.
- CADELL, PATRICK ROBERT, C.S.I., 1919; C.I.E., 1913; Indian Civil Service; b. 6 May 1871; Educ.:** Edinburgh Academy; Haileybury; Balliol College, Oxford. Member of Oxford University Football XV., 1890-91; selected to play for South of England; service in India since 1891; served in Bombay Presidency and in Calcutta; Lieutenant-Colonel Commanding 15th Bombay Battalion, Indian Defence Force; Chief Secretary, Govt. of Bombay. Commissioner in Sind. *Address:* Government House, Karachi.
- CALCUTTA, BISHOP OF RT. REV. FOSS WESTCOTT, D.D.; b. 23 October 1863, s. of the Rt. Rev. B. F. Westcott (late Bishop of Durham). Educ.:** Cheltenham and Peterhouse, Cambridge. Joined the S. P. G. Mission, Cawnpore, 1889. Bishop of Chota Nagpore, 1905. Bishop of Calcutta and Metropolitan in India, 1919. *Address:* Calcutta.
- CALNAN, DENIS, C.B.E. (1919), I.C.S., Commissioner of a division in the U. P. b. 14 May 1865. Educ.:** St. Stanislaus's College, Tullamore and Queen's College, Cambridge, m. Florence, d. of D. N. Reid, Behar. Has held charge of the Agra, Meerut, Kumaun, Allahabad, Gorakhpur, Fyzabad and Jhansi divisions. *Publications:*—Manual of famine administration, U. P. Recd. Kaiser-i-Hind Medal, first class, 1901.
- CAMPBELL, LIEUT.-GENERAL SIR FREDERICK, K.C.B., cr. 1916; C.B., D.S.O., Commanding 1st (Peshawar) Division; b. 25 Feb. 1860; m. 1886, Eleanor Martha, d. of late J. Cannon; Educ.:** Wellington College. Lieut. Royal Ayr and Wigton Militia, 1877-78; served with H. M. 40th Foot, 1879-82; Q.O. Corps of Guides, 1882-1899; A.A.G. Army Headquarters, India, 1906-08; commanded a Brigade, 1908-15; Hazara Expedition, 1888; Chitral Relief Force, 1895; North-West Frontier, India, 1897-98, Malakand operations in Bajaur and the Mamund Country, Utman-kheyl; Buner Tibet, 1903-04; Colonel 40th Pathans, 1911; North-West Frontier, India, 1916, operations in the Mohmand, Swat and Buner countries. *Address:* Peshawar, N.W.F.P.
- CAREY, BERTRAM SAUSMAREZ, C.S.I., 1914; C.I.E., 1893; V.D.; Commissioner of a District, Burma, since 1909; b. 1864; m. Mary e. d. of late I. D. Chepmell. Educ.:** Bedford Grammar School; appointed to Burma Police, 1886; to the Burma Commission, 1887; Political Officer in Chin Hills, 1889-95; Deputy Commissioner, 1900. *Address:* Rangoon, Burma.
- CARMICHAEL, SIR GEORGE, K.C.S.I. 1919; C.S.I. 1913; Member of Executive Council, Bombay; b. 25 March 1866; m. Mary Gertrude, d. of C. T. Glover, shipowner, Aberdeen; Educ.:** Grammar School and University, Aberdeen; Balliol College, Oxford, joined I.C.S. Bombay, 1886;

- Assistant Commissioner and Deputy Commissioner, Burma, 1889-94; Assistant Collector and Collector, Bombay, 1894-1909; Officiating Commissioner, Central Division, 1909. *Address*: Malabar Hill, Bombay.
- CARTER, FRANK WILLINGTON, C.I.E. 1915; C.B.E., 1918; Director of Turner, Morrison & Company, Limited, Calcutta; *b.* 16 Jan. 1865; *m.* Mary, widow of Commander Charles Collins *c.d.* of Rev. Dacres Oliver. *Educ.*: Cheltenham College. Articled to land agents in England and after farmed in Texas and California; joined the Basutoland Police in South Africa and came to India in 1891; joined the firm of Turner, Morrison & Co. in that year. *Address*: 6 Lyons Range or 7 Preforia Street, Calcutta.
- CAUMONT, RT. REV. MGR. FORTUNATUS HENRY, D.D., O.S.F.C.; 1st R.C. Bishop of Ajmer, since 1913; *b.* Tours, 10 Dec. 1871. *Educ.*: Tours. Took his vows, 1890; priest 1896; joined Mission of Rajputana, 1897; Military Chaplain of Neemuch, 1900, and of Mhow, 1901; Prefect Apostolic of the same Mission, 1903. *Address*: Bishop's House, Ajmer.
- CHAMNEY, LT.-COL. HENRY, C.M.G. 1900; Principal, Police Training College, Surdah; *b.* Shillelagh, co. Wicklow; *m.* 1st, 1907, Hon. Cecilia Mary Barnewall (*d.* 1908); *sister* of 18th Lord Trimlestone; 2nd, 1913, Alice, *d.* of Col. W. E. Bellingham of Castle Bellingham, co. London. *Educ.*: Monaghan Diocesan School. Served South Africa, 1900, first as Major Commanding Lumsden's Horse and later with South African Constabulary; joined Indian Police, 1909; accompanied the relief column to Manipur in 1891. *Address*: Police Training College, Surdah, Rajshahi, Bengal.
- CHANDAVARKAR, SIR NARAYAN GANESH, Kt. *cr.* 1910; B.A., LL.B.; *b.* 1855. *Educ.*: Elphinstone Coll., Bombay. Became pleader of Bombay High Court, and for a time English Editor of *Indu Prakash*; General Secretary of the Indian National Social Conferences; Vice-Chancellor, University of Bombay, 1909-12; officiated as Chief Justice, June 1909 and June 1912; Judge of the Bombay High Court, 1901-1913; Chief Minister, Indore, 1913-14. *Address*: Pedder Road, Bombay.
- CHAPMAN, HON. MR. JUSTICE EDMUND PELLY; Judge, High Court, Patna, since 1915; *b.* Calcutta, 16 August 1867; *m.* Mary Tupper *d.* of Major-General D. R. Cameron, C.M.G. *Educ.*: Clifton College; Emmanuel College, Cambridge. Served in Bengal; Assistant Secretary, Foreign Department, Govt. of India; Registrar, High Court, Calcutta; Superintendent, Legal Affairs, and Secretary, Judicial Department, Government of Bengal; Judge, High Court, Calcutta, 1914-15. *Address*: High Court, Patna.
- CHAPMAN, VEN. PERCY HUGH, M.A., LL.D.; Archdeacon of Lucknow, and Chaplain Naini Tal, U. P., since 1912; *b.* 13 April 1866; *m.* 1898, Katharine Margaret, *d.* of Hon. Justice Sir George Knox, Puisne Judge, High Court, Allahabad. *Educ.*: Felsted Grammar School; King William's College, Isle of Man; Corpus Christi College, Cambridge, B.A. and M.A.; Trinity College, Dublin, M.A., LL.B., LL.D.; Priest, 1890; *Address*: Naini Tal, U. P.
- CHARANJIT SINGH, SRDAR; chief of the Punjab; Fellow R. G. S.; member of Kapurthala royal family; *b.* 1883; *s.* of Kanawa Sochet Singh; *m.* *Educ.*: Jullunder, Chief College; Government College, Lahore. *Address*: Charanjit Castle, Jullunder City, Punjab.
- CHARKHARI STATE, H. H. MAHARAJA DHIRAJ SIPHAHDAR UL-MULK GANGA SINGH JU DEO BAHADUR; *b.* 2 Nov. 1851; *S.* 1914. *Address*: Charkhari State, Bundelkund.
- CHATTERTON, ALFRED, C.I.E. 1912, B. Sc., F.C.G.I., A.M.I.C.E., M.I.M.E., etc.; Director of Industries and Commerce in Mysore since 1912; *b.* 10 Oct. 1866; *m.* 2nd, 1901, Alice Gertude, *d.* of W. H. Wilson; two *s.* one *d.* *Educ.*: Finsbury Technical College; Central Institution, South Kensington. Indian Educational Service, 1888; Director of Industries, Madras, 1908. *Address*: Bangalore.
- CHAUBAL, SIR MAHADEV BHASKAR, K.C.I.E., *cr.* 1917; C.S.I. 1911; B.A., LL.B.; *b.* Sept. 1857; *Educ.*: Government High School, Poona; Deccan College, Poona; Assistant Master, Elphinstone High School, Bombay, 1879-83; Vakil, High Court, Bombay, 1883; Acting Puisne Judge, High Court, Bombay, 1908; Member of the Executive Council of the Governor of Bombay, 1910-17. *Address*: Girgaum, Bombay.
- CHAUDHURI, HON. MR. JUSTICE ASUTOSH, Kt., *cr.* 1917; B.A. (Cantab.), M.A. (Calcutta University), Barrister-at-Law; Judge of the Calcutta High Court; *b.* Bengali, Brahmin, 1860; *m.* Pratiba Devi, of the Tagore family of Calcutta. *Educ.*: St. John's College, Cambridge; Presidency College, Calcutta. After graduating in Calcutta went to Cambridge; admitted as an Advocate of the Calcutta High Court, 1886; President of the Bengal National Conference; founded the Bengal Land-holders Association in Calcutta one of the founders of the Calcutta National College; has always taken prominent part in reform movement in Bengal; first Hindu of the Calcutta Bar appointed Judge of the Court; now Senior Judge on original side of Calcutta High Court. *Address*: Ballygunge, Calcutta.
- CHELMSFORD, 3rd Baron (U.K.), *cr.* 1858; FREDERIC JOHN NAPIER THESIGER; P.C. 1916; K.C.M.G., *cr.* 1906; G.C.M.G., *cr.* 1912; G.M.S.I., G.M.I.E. 1916; Viceroy of India since 1916; barrister; *b.* 12 Aug. 1868; *e. s.* of 2nd Baron Chelmsford and Adria Fanny *e.d.* of Maj.-Gen. H. Rath, Bombay Army; *m.* 1894, Hon. Frances Charlotte Guest, *d.* of 1st Baron Wimborne; one *s.* four *d.* *Educ.*: Winchester College; Magdalen College, Oxford; B.A. (1st class Law); M.A., 1892. Fellow of All Souls College, 1892-99; Member of London School Board 1900-4; of London County Council, 1904-05; Alderman, London County Council, 1913; Governor of Queensland, 1905-9; Governor of New South Wales, 1909-13; a Knight of Justice of St. John, Jerusalem, in England; late Chancellor of the Order of St. Michael and St. George. *Address*: Viceregal Lodge, Delhi.

CHHOTA UDEPUR, MAHARAWAL SHREE FATEHSINHJI, RAJAJI OF; *b.* 22 Oct. 1884; *S.* 1895; *m. sis.* of Maharaja of Rajpipla (*d.* 1914); *Educ.*: Rajkumar Coll., Rajkot. A Chown Rajput. Installed 12 March 1906. *Heir*: Prince Shree Natwarsinhji, *b.* 1907. Salute of 9 guns. *Address*: Chhota Udepur, Rewa Kantha Agency.

CHITNAVIS, SIR GANGADHAR MADHAV, K.C.I.E., C.I.E.; *b.* 1863; President, Nagpur, District Council since 1888; President, Nagpur Municipality, 1896-1918; selected to represent Central Provinces on Impl. Legislative Council, 1893-1895, 1898-99; President of C. P. and Berar Provincial Conference, 1906; additional member of Viceroy's Legislative Council, 1907-8; elected representative of landholders in the C. P. reformed Council, 1910-12; leading landholder in C. P. *Address*: Nagpur, Central Provinces.

CHRISTOPHERS, MAJOR SAMUEL RICKARD, M.B., C.I.E.; I.M.S. Member, Malaria Commission, Royal Society and Colonial Office, 1898-1902. *Address*: Malaria Bureau, Central Research Institute, Kasauli.

CLARKE, THE HON. MR. GEOFFREY ROTHE, Director General, Posts and Telegraphs, since 1918 *b.* 4 July 1871. *m.* Hilda Geraldine Seymour. *Educ.*: Corrigan School, Kingstown and T. C., Dublin. Entered I.C.S., 1895. Officiated as P. M. G., Punjab, and N. W. F., 1903. Confirmed as P. M. G., Madras, 1906. On special duty with Ministry of Munitions in London, 1916 and sent on duty to America and Canada. *Address*: The Rookery, Simla.

CLARKE, REGINALD, C.I.E. (1919); Commissioner of Police, Calcutta. *b.* 16 March 1876. *m.* Edith, daughter of Andrew Johns, J. P., Shortlands, Kent. *Educ.*: in Ireland, Belgium, Germany and France. Joined Indian Police, 1900. *Address*: 2 Kyd St., Calcutta.

CLAYTON, HAROLD, C.I.E. (1919). *b.* 5 May, 1874. *Educ.*: Marlborough and Pembroke College, Cambridge. *m.* Miss A. L. Chapman. I.C.S. 1897. Served as Assistant Commissioner, Settlement Officer, Deputy Commissioner, Director of Agriculture and Registrar of Co-operative Soccs., Officiating Commr., Northern Division, Burma. *Address*: Ak-yab, Burma.

CLOGSTOUN, HERBERT CUNNINGHAM, C.I.E.; Guardian and Tutor to Maharaja Holkar of Indore, Central India, 1905-1912; *b.* 24 Jan. 1857; *Educ.*: Wellington College. Bengal Police, 1882; Special Service with Government of Bengal, 1887-91; under Govt. of India, Foreign Dept., at Ajmer, Dholpur, and Indore, 1891-1912.

CLOSE, HAROLD ARDEN, C.I.E., 1914; Inspector-General of Police, N.W. Frontier Province, since 1909; *b.* 13 Dec. 1863; *Educ.*: Cheltenham; Isle of Man. Joined India Police Dept., 1884; in Punjab first; N.W.F. Province, 1901; Superintendent, 1906; served Black Mountain Expedition, 1891; Mohmand Expedition, 1908. *Address*: Peshawar.

COBB, HENRY VENN, C.S.I., C.B.E., C.I.E.; M.A., LL.M., Cantab.; Resident, Mysore, since 1916; *Educ.*: King's School, Canterbury; Tri-

nity College, Cambridge. Arrived India, 1886; served as Asst. Resident, Mysore; Asst. Commissioner and Commissioner, Ajmer, 1895-97. Asst. Resident, Kashmir, 1899-1900; Resident, Jaipur, 1900-3; Gwalior, 1904-7; Jodhpur and Western Rajputana States, 1908; officiating as Agent to Gov.-Genl. for C. I., 1909. Resident, Baroda, 1909-12; Kashmir, 1914-1915. *Address*: The Residency, Bangalore.

COBDEN-RAMSAY, LOUIS EVELEIGH BAWTREE, J.P., C.I.E., I.C.S.; Political Agent, Orissa Feudatory States, since 1905; *b.* 29 Oct. 1873; *Educ.*: Dulwich College; Sidney Sussex College, Cambridge. Arrived in India, 1897; Under-Secretary to Govt. of Bengal in Revenue and General Dept., 1900-2; Registrar, Co-operative Credit Societies, 1905. *Address*: Sambalpur, B.N. Railway.

COLE, LIEUT.-COLONEL HENRY WALTER GEORGE, C.S.I.; Deputy Commissioner, Assam Commission; Political Agent in Manipur, 1914; *Educ.*: Wellington College; R.M.C., Sandhurst. Joined 5th Fusiliers, 1885; 2nd Gurkhas, 1887; Asst. Commissioner, Assam, 1891; Dy. Commissioner, 1901; Supdt., Lushai Hills, 1906-11; Director, Temporary Works, Delhi, 1912-13; served Hazara, 1883; Lushai, 1888-1889; Chin Lushai, 1889-92; N. E. Frontier, 1891. *Address*: The Residency Manipur.

COLLINS, MARK, Ph.D.; University Professor of Sanskrit Philology, Madras University, since 1914; Professor of Sanskrit and Comparative Philology, Trinity College, Dublin, 1908-14. *Address*: The University, Madras.

COLVIN, SIR ELIOT GRAHAM, K.C.S.I., C.S.I.; Agent to Governor-General, Rajputana, and Chief Commissioner, Ajmer-Merwara, since 1905; *b.* 18 July 1861; *m.* 1888, Ethel, *e. d.* of Sir Stuart Colvin Bayley. *Educ.*: Charterhouse; King's College, Cambridge. Entered I.C.S., 1882; Private Sec. to Lieut.-Gov. of Bengal, 1887; First Assistant Agent to Governor-General in Baluchistan, 1889; Settlement Commissioner, Alwar and Bharatpur, 1896; Political Agent, Eastern Rajputana States, 1897; Revenue and Judicial Commissioner, Baluchistan, 1897; General Superintendent, Thagi and Dakatti, 1901; Resident in Kashmir, 1902. *Address*: Ajmer, Rajputana.

COOCH BEHAR, MAHARAJA BHUP BAHADUR OF, SIR JITENDRA, K.C.S.I.; *b.* 20 Dec. 1886; *s.* of Maharaja Nripendra and Maharani Sinitry Devi (*nee* Sen; *S.* brother 1913; *m.* 1913, *d.* of Gaekwar of Baroda; *Educ.*: Eton; Imperial Cadet Corps. *Address*: Cooch Behar, Bengal.

COOK, ARTHUR WILLSTEED, C.I.E., I.C.S., B.A.; Magistrate and Collector, Bankura, Bengal, since 1911. *Educ.*: Portsmouth Grammar School; Pembroke College, Oxford. Entered I.C.S., 1896. *Address*: Bankura, Bengal.

COOK, EDWARD MITCHENER, C.I.E. (1919); Offg. Secretary to the Government of India, Finance Department. *Educ.*: Uppingham and Clare College, Cambridge. *m.* Christine, *d.* of Dr. Allen Duke. Entered I.C.S. 1903. Served in the U. P. until 1911. Under Secretary to Government of India, Home Department, 1911. Finance Department, 1912.

- Accountant General, Bombay, 1916. Ag. Controller of Currency, 1917-18. Address : Simla.
- COOKSON, MAJ.-GEN. GEORGE ARTHUR, C.B., C.M.G.;** Cavalry Brigade Commander; *b.* 6 Aug. 1860; *m.* 1898, Evelyn Sara, *d.* of late Horace Cockerell, C.S.I.; *Educ.*: Wimbledon (Brackenbury's) School; R.M.C., Sandhurst. Entered army, 1880; *Bt. Lt.-Col.*, 29 Nov. 1900; *Col.*, 1909, Lucknow Cavalry Brigade; served N.-W. F., 1897-98; Tirah, 1897-98; South Africa, 1899-1902; European War; 1914-16. Address : Lucknow.
- COPPEL, RT. REV. FRANCIS STEPHEN, R.C.** Bishop of Nagpur, since 1907; *b.* Les Gets, Savoy, 5 Jan. 1867; *Educ.*: College of Evian; University of France, Lyons, B.A., B. Sc. Entered Congregation of Missionaries of St. Francis de Sales, Annecy; Priest, 1890; sent to India for mission of Nagpur, 1892; for fifteen years attached to St. Francis de Sales College, Nagpur, as professor and principal. Address : Nagpur.
- CORY, VEN. CHARLES PAGE, Archdeacon of** Rangoon, since 1907; *b.* 16 June 1859; *Educ.*: Sedburgh School; St. John's Coll., Cambridge (M.A.). Ordained 1883; Chaplain, Rangoon Cantonments, 1892-95; Thatyetmyo, 1895-99; Incumbent of Port Blair, 1901-3; Chaplain of Rangoon Cathedral, 1903-4; Rangoon Cantonments, 1904-5; Acting Archdeacon and Commissary, 1906-7; Maymyo, 1906-14. Address : Maymyo, Burmah.
- COSGRAVE, REV. WILLIAM FREDERICK, Principal,** St. Paul's High School, Ranchi, since 1909; Hon. Canon of Durham; *b.* Dalkey, Co. Dublin, 1857; a freeman of City of Dublin. *Educ.*: Kingstown School, Co. Dublin; Trinity College, Dublin, M.A. and B. D. Ordained 1881. Address : Ranchi, Chota Nagpur.
- COTTERELL, CECIL BERNARD, C.I.E., I.C.S.** *Educ.*: St. Peter's School, York; Balliol College, Oxford. Entered I.C.S., 1898; has served in the Madras Presidency, since 1899. Deputy Commissioner, Salt and Abkari Dept.; 1905; Private Sec. to Governor of Madras, 1912-15. Address : Madras.
- COUTTS, WILLIAM STRACHAN, C.I.E., I.C.S.;** Registrar of Patna High Court, Bihar. Barrister; District and Sessions Judge, Bihar and Orissa, 1912. Puisne Judge, Patna High Court, 1918; *Educ.*: Dollar; Trinity College, Cambridge. Entered I.C.S., 1895; Joint Magistrate, 1905. Address : High Court, Patna.
- COVENTRY, BERNARD, C.I.E., 1912;** Agricultural Adviser to Native States in Central India, since 1916; formerly Agricultural Adviser to Govt. of India, Director of Agricultural Research Institute, and Principal of Agricultural College, Pusa, Behar; *b.* 10 Dec. 1859. *Educ.*: Beaumont Coll. Came to India, 1881, and joined indigo industry; started agricultural research station on modern lines, 1899; on foundation of Pusa Agricultural Research Institute and College, 1904, was made first Director and Principal; acted as Insp. Gen. of Agriculture and became first Agricultural Adviser to Govt. of India; retired 1916. Address : Indore, C.I.
- COX, JOHN HUGH, C.I.E.;** Excise Commissioner, C.I., since 1906. *Educ.*: Clifton College; Balliol College, Oxford. Entered I.C.S., 1888; Dy. Commissioner, 1903; Jt.-Sec., Board of Revenue, 1904. Address : Indore, C.I.
- COX, VEN. LIONEL EDGAR, M.A.;** Senior Chaplain, St. George's Cathedral, Madras, and Archdeacon of Madras; *b.* 28 March 1868. *Educ.*: Somerset College; Bath; Dorchester Theological College; Durham University. Deacon, 1891; Priest, 1894; joined Madras Ecclesiastical Establishment, 1898; Archdeacon of Madras and Bishop's Commissary, 1910. Address : Cathedral, Madras.
- COX, CAPTAIN WALTER HULBERT, D.S.O.** I.M.S.; Supdt., Burma Lunatic Asylum; L.R.C.P. Ed.; L.R.C.S., Ed.; L.F.P.S., Glas. Medico-Psychological Certificate; *b.* 9 Jan. 1875. Entered army, 1898; served China, 1900-1901; Mahsud-Waziristan Exp. Address : Rangoon.
- CRADDOCK, SIR REGINALD HENRY, K.C.S.I., C.S.I.;** Lieut.-Governor of Burma, since 1917; *b.* 11 Mar. 1864; *s.* of late Surg.-Major William Craddock, 1st Goorkhas; *m.* 1888, Frances Henrietta, *y. d.* of Gen. H. R. Browne, C.B. *Educ.*: Wellington; Keble College, Oxford. Entered I.C.S., 1884; served in C.P. in various capacities, district and secretarial; Chief Sec. to Chief Commissioner, 1900; Commissioner, 1902-7; Chief Commissioner, 1907-12; Home Member of Viceroy's Council, 1912-16. Address : Government House, Rangoon.
- CRERAR, JAMES, M.A., C.I.E. (1917);** Secretary to the Government of Bombay, Political, Judicial and Special Departments, *b.* 1877; *m.* to Evelyn, *d.* of the late Hon. Charles Brand. Educated at George Watson's College; Edinburgh, Edinburgh University and Balliol College (Oxon). Assistant Collector, Sind; Manager of Encumbered Estates, Sind; Assistant Commissioner in Sind; Deputy Municipal Commissioner, Bombay; Municipal Commissioner, Bombay; Private Secretary to H. E. the Governor of Bombay. Address : The Secretariat, Bombay.
- CRICHTON, LT.-COL. RICHMOND TREVOR, C.I.E.;** Director of Surveys, Bengal, since 1900; *b.* 8 March 1865; *Educ.*: Edinburgh; R.M.C., Sandhurst. Entered 2nd Batt. H.L.L., 1884; Captain, I.S.C., 1895; Major, I.A., 1902; joined Survey Dept., 1889; Dy. Supdt., 1895; Supdt. of Settlement Surveys, 1895. Address : Survey Department, Calcutta.
- CRIPPS, COL. ARTHUR WILLIAM, C.B.;** *b.* 16 Jan. 1862. Entered Army, 1882; Capt. I.S.C., 1893; Major I.A., 1901; Lt.-Col., 1908; Col., 1913; served 1st Miranzai Expedition, 1891; Tirah, 1897-98; China, 1900; European War, 1914-16. Address : Army Headquarters.
- CROFT, SIR FREDERICK LEIGH, 3rd Bart.,** Exchange Broker (Messrs. Croft and Forbes), *b.* 1860. *Educ.*: Eton. Succeeded his father, 1904. Address : Byculla Club, Bombay.
- CROSTHWAIT, HENRY ROBERT, C.I.E.;** Central Provinces Commissioner, since 1915; Registrar, Co-operative Credit Societies. Entered I.C.S., 1900. Address : Nagpur, C.P.

CRUM, THE HON'BLE MR. WALTER ERSKINE, O.B.E. (1918). Partner in MESSRS. Graham & Co. *b.* 2 September 1874. *m.* Violet Mary Forbes. *Educ.*: Eton. New College, Oxford. President, O.U.B.C., 1895-97. President, Bengal Ch. of Commerce 1919. Member, Bengal Legislative Council, 1918-19. Major, 3rd Calcutta Light Horse. *Address*: C-o. Messrs. Graham & Co., 9 Clive Street, Calcutta.

CRUMP, HARRY ASHBROOKE, C.S.I., B.A. (Oxon.); Financial Commissioner, C.P., since 1913; *b.* 1863; *Educ.*: Balliol College, Oxford. Joined I.C.S., 1885; served in C.P. as Asst. Commissioner, Commissioner of Excise, Dy. Commissioner; Chief Sec. to Chief Commissioner, 1901-2 and 1906-7; Offg. Chief Commissioner, 1912. *Address*: Nagpur, C.P.

CULLEN, LT.-COL. ERNEST HENRY SCOTT, C.M.G., M.V.O., D.S.O.; 32nd Pioneers; *b.* 16 Nov. 1869. Entered Army, 1890; Lt.-Col. 1915; served Chitral, 1895; N.W.F., 1897-98; Tirah, 1897-98; Waziristan, 1902; Tibet, 1903, 4; Abor Expedition, 1912; European War (Mesopotamia), 1914-16. *Address*: Sialkot.

CURTIS, GEORGE SEYMOUR, C.S.I.; Member of Executive Council, Bombay, since 1916; *Educ.*: Marlborough; Christ Church, Oxford. Entered I.C.S., 1888; Assistant Political Resident, Aden, 1889-91; Postmaster-General, Madras, 1897-1902; Director, Land Records, 1906. *Address*: Bombay.

DADABHOY, MANECKJI BYRAMJEE, C.I.E. *b.* Bombay, 30 July 1865; *Educ.*: Proprietary High School and St. Xavier's College, Bombay. Joined Middle Temple, 1884; called to Bar, 1887; Advocate of Bombay High Court, 1887; Government Advocate, Central Provinces, 1896; nominated to Viceroy's Legislative Council, 1908; elected to the Council, 1910 and 1914; President of All-India Industrial Conference, Calcutta, 1911. *Address*: Nagpur, C. P.

DALLAS, LT.-COL. CHARLES MOWERAY, C.S.I.; Commissioner, Punjab, 1911-16; *b.* 30 Aug. 1861; Entered Army, 1881; Major I.A., 1901; Lt.-Col., 1907; served Miranzai Expedition, 1891; Asst. Commissioner, 1887; Deputy Commissioner, 1897; Political Agent, Phulkiang States and Bahawalpur, 1905; Commissioner, Delhi, 1910.

DALY, FRANCIS CHARLES, C.I.E.; Dy. Insp. Genl. of Police, C.I.D., Bengal, since 1913; *b.* 22 March 1868; *Educ.*: Dedham Grammar School. Joined India Police Dept., 1887; Dist. Supdt., 1897; Offg. Dy. Inspector-General, 1908; on Special Duty, 1909-11; served Lushai Hills, 1891-1892.

DARLEY, BERNARD D'OLIER, C.I.E. (1919); Executive Engineer, P. W. D., United Provinces; *b.* 24 August 1880. *Educ.*: T. C. Dublin and Cooper's Hill, A.M.I.C.E. Irrigation work in P. W. D. since 1903. *Address*: Naini Tal, U. P.

DAS, HON. M. S., C.I.E.; *b.* 28 April 1848; *Educ.*: Calcutta University. M.A., B.L. M.R.A.S., F.N.B.A. Represented Orissa in Bengal Legislative Council four times; Fellow of Calcutta University; elected by Legis-

lative Council of Bihar and Orissa to Imperial Council, 1913; nominated to Legislative Council of Bihar and Orissa. *Address*: Cuttack, Orissa.

DAS, THE HON. MR. JUSTICE PROFULLA RANJAN, Judge, High Court, Patna, 1919. *b.* 28 April, 1881. *Educ.*: St. Xavier's College, Calcutta. *m.* Dorothy Mary Evans, 1904. *Address*: Ali Manzil, Patna.

DAS, SATISH RANJAN, Standing Counsel to the Government of India, since 1917. *b.* 29 February 1872. *Educ.*: Manchester Grammar School. *m.* Bonolata, *d.* of the late B. L. Gupta, I.C.S.; called to the Bar (Middle Temple), 1894. Advocate, Calcutta High Court, 1894. *Address*: 7 Hungerford St., Calcutta.

DAVID, SIR SASSOON (Jacob), 1st Baronet, *s.* of Jacob David, of Bombay; *b.* 11th, Dec. 1849; *Educ.*: Bombay; Cotton Yarn Merchant and Mill Owner, and J.P., Sheriff 1905; Member of Bombay Improvement Trust Board, of Municipal Corporation, and of its Standing Committee, Promoter and Chairman of Bank of India, and Chairman and Director of several Cos.; was Chairman of Bombay Millowners' Association, 1904-05, Member of Council of Governor-General of India, Kt., 1905; *m.* 1876, Hannah, *d.* of late Elias David Sassoon, *Address*: 7, Esplanade Road, Fort, Bombay.

DAVIDSON, LT.-COL. JAMES, D.S.O., M.D., M.A.; I.M.S.; *b.* 27 Nov. 1865; *Educ.*: Edinburgh Academy and University. Entered service, 1893; Lt.-Col., 1913; served Waziristan, 1894-95; Chitral, 1895; Suakin, 1896; Tirah, 1897-98; Tibet, 1903-4; Abor Expedition, 1912. *Address*: Dehra Dun.

DAVIDSON, LIONEL, C.S.I.; Revenue Sec. to Govt. of Madras, since 1914. *b.* 19 Jan. 1868; *Educ.*: University College School; Balliol College, Oxford (M.A.). Entered I.C.S., 1886; Under-Sec. to Govt., 1896; Sec. to Land Revenue Comrs., 1900; Comsr. and District Judge, Coorg, 1902; Collector and Magistrate, Madras, 1905; Sec. to Govt. and Member of Leg. Council, Madras, 1910; Member, Imp. Leg. Council, 1916; Actg. Chief Sec., Madras Govt., 1916. *Address*: Madras.

DAWOOD KHAN, SIR, K.C.M.G. (Hon.) 1905. Maftah-es-Saltana. Consul General for Persia. *Address*: Simla.

DE, KIRAN CHANDRA, B.A., C.I.E., I.C.S.; Secretary to Govt. of Bengal, Gen. Dept., since 1915; *b.* Calcutta, 19 Jan. 1871; *Educ.*: Presidency College, Calcutta; St. John's College, Cambridge. Registrar of Co-operative Societies, also Fishery Officer, 1905; Magistrate-Collector, Rangpur, 1911; Member of Bengal District Administration Committee 1913; Press Censor, Bengal, 1914. *Address*: Cossipore, Calcutta; Brookside, Shillong.

DE MONTMORENCY, GEOFFREY FITZHERVEY, C.I.E.; I.C.S.; Personal Assistant to Chief Commissioner, Delhi, since 1912; *b.* 23 Aug. 1876; *Educ.*: Malvern; Pembroke College, Cambridge. Entered I.C.S., 1899; Deputy Commissioner, Lypalpur, 1907; Settlement Officer, Chenab, 1909; Junior Secretary

- to Financial Commissioner, 1911; on special duty in connection with transfer of Capital to Delhi, 1912. *Address*: c/o Chief Commissioner, Delhi.
- DENNYS, LT.-COL. SIR HECTOR TRAVERS, K.B.E., C.I.E.**; Indian army; Inspector-General of Police, Punjab, since 1914; *b.* 9 Mar. 1864; *Educ.* Cheltenham. Entered army, Manchester Regt., 1885; Indian army, 1896; joined Punjab Police, 1888; Superintendent of Police, 1891; Deputy Inspector-General of Police, 1906. *Address*: The Park, Lawrence Road, Lahore.
- DESIKACHARRY, SIR VEMBAKKAM C., Kt., B.A., B.L., F.M.U.**; Judge of the Court of Small Causes, Madras, since 1908; *b.* 29 Dec. 1861; *Educ.*: Presidency College, Madras. Additional Member, Madras Legislative Council, 1904-8; Fellow, Madras University, since 1903; sometime Vice-President, National Indian Association, Madras. *Address*: Padma Vilas, Luz, Mylapore, Madras.
- DES VOEUX, LT.-COL. HERBERT, C.S.I.**, Inspector General of Police, Burma. *b.* 8 August 1864. *m.* Minna d. of the late Lt.-Col. T. T. Haggard, R. A. *Educ.*: Berkhamstead. Enlisted 8th Hussars, 1883; Commissioned, 1887. Served with 1st Bengal Lancers and Burma Mil. Police. Appointed to Burma Commission, 1890. *Address*: Rangoon.
- DEVADHAR, GOPAL KRISHNA**, Vice-President, Servants of India Society. *b.* 1871. *m.* Dwarkabai Sohani, of Poona. *Educ.*: New English School, Poona, and Wilson College, Bombay. M. A., Bombay University, 1904. Joined the late G. K. Gokhale in his public work, 1904, and was first member to join Servants of India Society, 1905. Head of Bombay Branch. Toured in England and on the Continent in 1918 as member of Indian Press Delegation. Has published several pamphlets on co-operation. *Address*: Girgaum, Bombay.
- DEW, LT.-COL. ARMINE BRERETON, C.S.I., C.I.E.**; Political Agent, Kalat, since 1912; *b.* 27 Sept. 1867; *Educ.*: Wellington. Entered army, 1888; Indian army, 1899; served Hazara Expedition, 1891; attached to Gilgit Agency, 1894; joined Political Department, 1897; Political Agent, Gilgit, 1908-12. *Address*: Mastung, Baluchistan.
- DHRANGADHRA, H. H. MAHARANA SHREE GHANSHYAMSINGHI**; *b.* 1891; *s.* father 1911. *Educ.*: in England with private tutors under guardianship of Sir Charles Ollivant. *Address*: Dhrangadhra, Kathiawar.
- DICK, HON. GEORGE PARIS, C.I.E.**; Bar-at-law; Member of C. P. Legislative Council, 1917; Govt. Advocate, C. P.; *b.* 1866; *Educ.*: Dulwich College. Called to Bar, Middle Temple, 1889; Advocate of Calcutta High Court, 1893; of the Judicial Commissioner Court, Nagpur, 1891; Lecturer in Law to the Morris College, Nagpur. *Address*: The Kothi, Nagpur.
- DINAJPUR, MAHARAJA SIR GIRIJANATH RAY, BAHADUR OF, K.C.I.E.**; *b.* 1860; *s.* by adoption to Maharaja Traknath Ray and Maharani Shyammohei of Dinajpur; *m.* 1876. *Educ.*: Queen's College, Benares. Member, E. B. and Assam Leg. Council, 1906-11; Vice-President, B. I. Association, Calcutta; former President, E. B. Landholders' Association. President, Dinajpur Landholders' Association; Member, E. I. Association, London; Asiatic Society, Bengal; Calcutta Literary Society; Bangiya Sahitya Parishat. *Heir*: Maharaja Kumar Jagadishnath Ray. *Address*: Dinajpur Rajbati, Dinajpur; 43 Wellesley Street, Calcutta.
- DOBBS, HENRY ROBERT CONWAY, C.S.I., C.I.E., F.R.G.S.; I.C.S.**; *b.* 26 Aug. 1871; *Educ.*: Winchester College; Brasenose College, Oxford. Entered I.C.S., 1892; in Political Service in Mysore and Baluchistan, 1899-1901; investigated navigation of Euphrates from latitude of Aleppo to Baghdad, 1902-3; Consul for Seistan and Kain, 1903; British Commissioner, Russo-Afghan Boundary, 1903-4, during which period was on duty at Herat and neighbourhood; traversed unexplored tract of Hazarajat between Herat and Kabul, 1904; returned to Kabul as Secretary to Kabul Mission, 1904; Famine Commissioner, Rajputana, 1905; Dy. Sec., Foreign Dept., 1906, Resident and Consul-General, Turkish Arabia; Oct. 1914; Political Officer with Mesopotamian Force supervising Civil Administration of Territories in British Occupation, Jan. 1915-Aug. 1916; Revenue and Judicial Commissioner, Baluchistan, Apr. 1917. *Address*: Quetta.
- DONALD, DOUGLAS, C.I.E.**; Commandant, B.M. Police and Samana Rifles; *b.* 1865; *Educ.*: Bishop Cotton School, Simla. Joined the Punjab Police Force at Amballa, 1888; transferred to Peshawar, 1889; appointed C.B.M. Police, Kohat, 1890; served Miranzai Expeditions, 1891, on Samana posts and Tirah, re-transferred to Kohat, 1899; on special duty to raise Samana Rifles. *Address*: Military Police, Kohat.
- DONALD, HON. SIR JOHN STUART, K.C.I.E., C.S.I., C.I.E.**; *b.* 1861; *Educ.*: privately; Bishop Cotton School, Simla. Appointed Extra Assistant Commissioner, 1882; Assistant Commissioner, 1890; promoted for service in Gomal Pass and with Sherani Expedition in charge of Gomal Pass, 1890-93; accompanied mission to Kabul under Sir H. Durand, 1893; on special duty N.W. Frontier, and British Commissioner, for Demarcation of Kurram-Afghan boundary, 1894; Political Agent of the Tochi, and Deputy Commissioner of Bannu, 1899-1903; served Mahsud-Wazirs; Chief Political Officer with force against Kabul Khel Wazirs and Gumati, 1902; British Representative on Indo-Afghan Commission, 1903; Resident in Waziristan, 1908; British Commissioner, Anglo-Afghan Commission for Settlement of Border Disputes, 1910; Chief Commissioner and Agent to the Governor-General in the N.W. Frontier Province, 1913-15; appointed an Additional Member of the Imperial Legislative Council of India, 1916. *Club*: East India United Service.
- DORNAKAL, BISHOP OF (and Assistant Bishop of Madras)**, since 1912; (RT. REV. VEDANAYAKAM SAMUEL AZARIAH (1st native bishop in India); *b.* 17 Aug. 1874; *Educ.*: C. M. S. High School, Mengnanapuram; C.M.S. College, Tinnevely; Madras Christian College. One of founders of Indian Missionary Society of

- Tinnevely, 1903; Hon. Secretary, 1903-9; Hon. Gen. Secretary of National Missionary Society of India, 1906-9; visited Japan as Delegate of World Student Christian Federation, 1907, and its Vice-President, 1909-11; visited England as Delegate to World's Missionary Conference, 1910; Head of Dornakal Mission, 1909-12. *Address*: Dornakal.
- DOUGLAS, LT.-COL. MONTAGU WILLIAM, C.S.I. (1919), C. I. E. (1903), Chief Commissioner, Andamans and Nicobars since 1913. *b.* 23 November 1863. *Educ.*: Fettes College. *m.* Helen Mary Isabella Downer. Joined N. Stafford Regiment, 1884. Indian Army, 1887. Punjab Commission, 1890. Member, Executive Committee, Coronation Durbar, 1903. *Address*: Port Blair, Andamans.
- DRAKE-BROCKMAN, SIR HENRY VERNON, Kt., M.A., LL.M.; Barrister-at-law; Judicial Commissioner, Central Provinces, since 1906; *b.* Madras, 8 Nov. 1865; *m.* 1888, *l.* M., *d.* of A. G. Faichnie, Deputy Postmaster-General, C.P. and Berar. *Educ.*: Charterhouse; St. Peter's College, Cambridge. First-class Law Tripos, 1886; went to India, 1886; Under-Secretary to the Chief Commissioner, C.P., 1890 and 1892; Commissioner of Excise, 1892-94; Deputy Commissioner, Wardha, 1895; Divisional and Sessions Judge, Nerbudda, 1896-1901; Deputy Commissioner, Raipur, 1901-3; officiated as Judicial Commissioner, 1903, 1905 and 1906. *Address*: Nagpur, C.P.
- DU BOULAY, SIR JAMES HOUSEMAYNE, K.C.I.E., C.I.E., C.S.I.; *b.* 1868; *s.* of late Rev. J. T. H. Du Boulay, Housemaster at Winchester; *m.* 1901, Freda Elais, *d.* of Alfred Howell. *Educ.*: Winchester; Balliol College, Oxford. Entered I.C.S., 1889; Deputy Municipal Commissioner on Plague Duty, Bombay, 1897-1900; acted as Private Secretary to Lord Northcote, Governor of Bombay, 1901; to Lord Lamington, Governor of Bombay, 1903-7; Secretary to Government, Bombay, 1909; Private Secretary to Viceroy (Lord Hardinge), 1910-16; Secretary to Govt. of India, Home Department, 1916. *Address*: Simla.
- DUNDAS, ROBERT THOMAS, C.I.E.; Inspector-General of Police, Bihar and Orissa, since 1914; additional Member of Lieut.-Governor's Council. *Address*: Bihar.
- EBRAHIM, SIR CURRIMBOY, 1st Baronet; *s.* of late Ebrahimbhoy Pabany, Shipowner; *b.* Oct. 25, 1839; sometime a Trustee of Port of Bombay, and Pres. of the Anjuman-i-Islam and of Mahomedan Educational Conference in Bombay; leading member of the Khoja community; J.P.; of Bombay, Vice-Pres. of All India Moslem League, Merchant and Millowner; interested in many charitable institutions; Kt. 1905; *m.* 1st, 1854, Foolbai, *d.* 1875, *d.* of Assobhai Ganji of Bombay; 2ndly, 1876, Foolbai, *d.* of Vishram Sajjan of Bombay. *Address*: Pabany Villa, Warden Road, Bombay.
- EESTERMANS, DR. FABIAN ANTHONY, O.C., Catholic Bishop of Lahore, since 1905; *b.* Belgium, 1858. *Educ.*: Episcopal Seminary, Hoogstraten; studied Philosophy at Mechlin; joined the Capuchin Order at Enghien, 1878; ordained Priest, 1883; Professor in Apostolic Seraphic School at Bruges, 1885-9; came to India, 1889. *Address*: Lawrence Road, Lahore.
- EGERTON, SIR BRIAN, K.C.I.E., C.I.E.; In H.H. Nizam's service; *b.* 1857; *s.* of late Major-General C. R. Egerton. *Educ.*: Cheltenham College. Entered Punjab Police, 1879; served Afghan War, 1880-81. *Address*: Secunderabad Deccan.
- ELIOTT, LT.-COL. FRANCIS HARDING, C.S.I., I.A.; Commissioner, Irrawaddy Division, Burma, since 1911; *b.* 1862. *Educ.*: Harrow. Entered army, 1881; joined Indian Army, 1885; Burma Commission, 1888; Lt.-Col., 1907; served Burma, 1888-9. *Address*: Irrawaddy Division, Burma.
- EVANS, COL. GEORGE HENRY, C.I.E., F.L.S.; Superintendent Civil Veterinary Department, Burma; *b.* 1863; *Educ.*: Rathmines School, Dublin; Royal Veterinary College, London. Entered Army Veterinary Dept., 1884; Lt.-Col., 1908; Colonel, 1913; served with Chin-Lushai Exp., 1889-90. *Address*: Tank Road, Rangoon.
- EVERSHED, JOHN, F.R.S., F.R.A.S.; Director, Kodaikanal and Madras Observatories since 1911; *b.* 1864. Assistant Director, Kodaikanal and Madras Observatories, 1906; discovered radial movement in sunspots, 1909; visited New Zealand to select site for Cawthron Observatory, 1914; undertook astronomical expedition to Kashmir, 1915. *Address*: The Observatory, Kodaikanal.
- EWING, REV. J. C. R., M.A., D.D., LL.D., C.I.E.; Principal, Forman Christian College, Lahore; Vice-Chancellor, Punjab University since 1910; *b.* Pennsylvania, U.S.A., 23 June 1854. *Educ.*: Washington and Jefferson U.S.A. Came to India, 1879. *Address*: Lahore.
- FAGAN, PATRICK JAMES, C.S.I., I.C.S.; Financial Commr., Punjab, since 1910; Member of Council of Lt.-Gov. *Educ.*: Blundell's School, Tiverton; St. John's College, Cambridge. Entered I.C.S., 1895. *Address*: Lahore.
- FAIRBROTHER, COL. WILLIAM TOMES, C.B., F.R.G.S.; I.A.; *b.* 1856; Entered army, 1875; Lt.-Col., I.A., 1901; Brevet-Col. 1904; served Afghan War, 1878-80; Sikkim Exp., 1888. N.E. Frontier, Assam, 1894; Chitral 1895; Waziristan, 1901-2; was Commandant 13th Rajputs, 1898-1905. *Address*: Barcilly; Srinagar.
- FAIYAZ ALI KHAN, NAWAB, SIR MUMTA ZUD-DOWLAH, MAHOMED, OF PAHASU, K.C.V.O., K.C.I.E., C.S.I.; Prime Minister at Jaipur; *b.* 1851; *s.* of late Nawab Sir Faiz Ali Khan Bahadur. Served for fourteen consecutive terms on U. P. Leg. Council and for two years on Imp. Council; President of Board of Trustees, M.A.O. College, Aligarh; trustee, Government College, Agra, Lady Dufferin Fund, etc. *Address*: Nawab's House, Jaipur, Rajputana;
- FANE, MAJ.-GEN. SIR VERE BONAMY, K.C.I.E. (1918), C.B., C.I.E., I. A.; Brig.-Genl. commanding Bannu Brigade; F.E.G.S.; *b.* 1863. *Educ.*: Privately; Woolwich.

Entered army from Militia 1884; Joined, I. A. 1888; served Waziristan, 1894-95; Tochi F. F. 1897-98; D.A.A.G. 1st Brigade China, 1900; D. A. Q. M. G. Cavalry Brigade, China, 1901-02, Chief of Police; N.W.F., 1908; Mohmand, commanded troops from Bannu and N. W. Militia at decisive action near Dirdoni, Tochi, 26 March 1915. Commanded 7th Meerut Division in Mesopotamia, Palestine and Syria and was first British General to enter Baghdad, 11th March, 1917. Five times mentioned in despatches, promoted Maj.-Gen. for distinguished conduct in the field, received Croix de Guerre and Order of the Nile (2nd class). *Address*: Simla.

FAREWELL, COMMANDER MICHAEL WARREN, C.I.E.; Marine Transport Officer and Port Officer, Karachi, since 1914; *b.* 1868. *Educ.*: Somersetshire College, Bath; The Conway Liverpool. Sub-Lieut., R.I.M., 1890; at R.N.C., Greenwich, 1893-94; Lieut. 1895; Commander, 1906; commanded Lawrence, Canning, Mayo, Minto, Hardinge, Dalhousie; employed in connection with gun-running operations in command R.I.M.S. Hardinge. 1910; Deputy Conservator, Madras, 1910-13, *Address*: Manore, Sind.

FARIDKOT, H. H. BARAR BANS RAJA BALBIR SINGH BAHADUR, RAJAH OF; *b.* 1870; *S.* father 1898. Rules the one of Sikh States of the Punjab. *Address*: Faridkot, Punjab.

FARIDOONJI JAMSHEDJI, NAWAB SIR FARIDOON JUNG FARIDSON DAULA BAHADUR, K.C.I.E., C.S.I., C.I.E.; Assistant Minister, Political Department, Nizam's Government; *b.* 1849; *Address*: Safabad, Hyderabad, Deccan.

FATEH ALI-KHAN, HON. HAJEE, NAWAB KIZILBASH, C.I.E.; *b.* 1862. *S.* to headship of Kizilbashs, 1896. Placed himself and his great clan at disposal of Government for Chitral campaign, and induced many of tribes across border to adopt attitude of pacific non-intervention. For this service, received 3,000 acres of land in Chenab Canal Colony for settlement of his followers; has served on Punjab Legislative Council; representative of Punjab at Famine Conference, 1897; Life President of Anjumani-Islamia, Lahore, and Imamia Association of Punjab; a Counsellor of Aitchison Chief's College, Lahore; Fellow of Punjab University; Trustee of Aligarh College; *Heir*: *s.* Nisior Ali Khan. *Address*: Aitchison Chiefs' Coll., Lahore.

FELL, SIR GODFREY BUTLER HUNTER, C.S.I., C.I.E.; Financial Adviser, Military Finance Dept. Govt. of India, since 1915; member of Indian Army Commission of Inquiry, 1919. *b.* 1872; Fellow of Magdalen College, Oxford; *m.* 1904, Janet Camilla, *o. d.* of Gen. Sir D. J. S. McLeod. *Educ.*: Eton; Magdalen College, Oxford. Entered I.C.S., 1894; Under Sec. to Burma Govt., 1899; Private Sec. to Lieut.-Gov., 1903; Depy. Sec., Home Dept., Govt. of India, 1906-09.

FERARD, HENRY CECIL, B.A., C.I.E.; Commissioner, Allahabad Division; *b.* 1864. *Educ.*: Eton; University College, Oxford. Entered I.C.S., 1885; and posted to N.W.P. and Oudh. *Address*: Allahabad.

FERGUSSON, JOHN CARLYLE, Off. Comr., N. India Salt Revenue since March, 1918. *b.* 17 June, 1872. *m.* Muriel, *d.* of Wm. Anderson of Hallyards, Peeblesshire. *Educ.*: St. Paul's School and Trin. College, Oxon. Entered I.C.S., 1895. Under Sec. to Government of India (Home Department), 1904. *Address*: Agra or Simla.

FRENCH-MULLEN, MAJOR JOHN LAWRENCE WILLIAM, C.I.E.; Commandant, Myitkyina Gurkha Rifle Battalion, Burma Military Police; 13th Duke of Connaught's Lancers (Watson's Horse), I.A.; *b.* 1868; *Educ.*: The Oratory School, Edgbaston. Joined army, 1887; I.A., 1889; served Kachin Hills, 1893; commanded Military Police Escort to the Burma China Boundary Commission, 1898, 1900; commanded Military Police Column which entered Pienma, N.E.F., 1910. *Address*: Myitkyina, Upper Burma.

FILOSE, LT.-COL. CLEMENT, M.V.O.; Military Sec. to Maharaja of Gwalior, since 1901; *b.* 1853. *Educ.*: Carmelite Monastery, Clondalkin; Carlow College. Entered Gwalior State service, 1872; Lt.-Col. 1903; Assistant Inspector-Gen., Gwalior Police and General Inspecting Officer, 1893-97; A. D. C. to the Maharaja Scindia, 1899-1901. *Address*: Gwalior.

FIRMINGER, VEN. WALTER K., F.R.G.S.; Archdeacon of Calcutta, since 1914; Editor of the Indian Churchman, 1900-05; Chaplain on Indian Establishment; *b.* 1870; *Educ.*: Lancing and Bury St. Edmunds; Merton Coll., Oxford, B.D., M.A.; Honour School of Modern History. Ordained Deacon at Hereford, 1893; Priest in Mombasa, 1895; Sub-dean of Zanzibar, 1896; present at bombardment. *Address*: St. John's House, Calcutta.

FLETCHER, HON. ERNEST EDWARD, Judge of High Court, Calcutta, since 1907; *b.* 25 May 1869; *Educ.*: Queen's College, Oxford; B.A., 1890. Called to Bar, Lincoln's Inn, 1892. *Address*: Calcutta.

FOULQUIER, RT. REV. EUGENE CHARLES, Vicar Apostolic of Northern Burma and titular Bishop of Corydallus, since 1906; *b.* 1866. *Address*: Mandalay.

FOX, SIR CHARLES EDMUND, Kt., K.C.S.I., cr. 1917; Chief Judge, Chief Court, Lower Burma, since 1906; *b.* 1854; *Educ.*: Prior Park College, Bath. Called to Bar, 1877; Government Advocate, Burma, 1884-1900; Judge of Chief Court, 1900. *Address*: Rangoon.

FRASER, SIR HUGH STEIN, Kt., Partner in firm of Gordon Woodroffe of Madras; *b.* 5 March 1863; *m.* 1904, Fanny Lousie, *d.* of late John Bisdee Fawcett. *Educ.*: Blackheath Proprietary School; Rugby. A Member of Madras Port Trust for several years; additional Member of Council, Madras, 1910, 1911, 1914, 1915; Chairman, Chamber of Commerce, Madras, 1910, 1911, 1914; Director of Bank of Madras; Sheriff of Madras, 1915. *Address*: Madras.

FREELAND, BRIG.-GEN. SIR HENRY FRANCIS EDWARD, K. B. E. (1920); C. B. (1917); M.V.O. (1911); D.S.O., (1916), Officer of the Legion of Honour. Agent, B. B. and C. I. Railway. *b.* 29 December 1870. *m.* Ethel

Louise, *d.* of Col. T. Malcolm Walker, R. A. Entered R. E. 1891. Served in Chitral, with China Expeditionary Force and in European War. *Address*: Bombay.

FREMANTLE, SELWYN HERVE, C.S.I. (1919), C.I.E. (1915), V. D. (1918), I.C.S. *b.* 11 September 1869. *Educ.*: Eton and Magdalen College, Oxford. *m.* Vera, *d.* of Henry Marsh, C.I.E., late Chf. Engineer, P. W. D. Irrigation Branch, U. P. *Publications*: Settlement Reports, Rai Bareilly District (1896), Bareilly District (1902); A Policy of Rural Education (1915). *Address*: Commissioner's House, Meerut.

FRENCH, LEWIS, C.B.E. 1919, C.I.E., Secretary to Punjab Government, since 1916; *b.* 26 October 1873; *Educ.*: Merchant Taylor's School; St. John's College, Oxford. Assistant Commissioner, Punjab, 1897; Colonisation Officer, Chenab Colony, 1904-06; Director, Land Records, 1906, Director, Agriculture, 1907; Deputy Commissioner, Shahpur, 1908; Chief Minister, Kapurthala State, 1910-15; Special Commissioner, Defence of India Act, 1915; Director, Land Records, 1915. *Address*: Lahore.

FYSON, PHILIP FURLEY, B.A. (Cantab.), F.L.S.; Professor of Botany, Presidency Coll., Madras, since 1904. *Educ.*: Loretto School; Sidney Sussex College, Cambridge; Science Master, Aldenham Grammar School, 1901-2; Assistant to Professor of Botany, Univ. Coll., Aberystwyth, 1902-3. Assistant at Aynsom Agricultural Station, 1903-4. *Address*: Basbat, Teynampet, Madras.

GAGE, ANDREW THOMAS, M.A., B.Sc., M.B., F.L.S.; Major, I.M.S.; Director, Botanical Survey of India; Supdt., Royal Botanic Gardens, Calcutta, since 1906; *b.* 1871; *Educ.*: Grammar School, Old Aberdeen; University of Aberdeen; Assistant to Professor of Botany, University of Aberdeen, 1894-96; entered I.M.S., 1897; Curator of Herbarium, Calcutta Botanic Gardens, 1898. *Address*: Royal Botanic Gardens, Calcutta.

GAIT, SIR EDWARD ALBERT, K.C.S.I., *cr.* 1915 C.I.E. 1907, C.S.I. 1912; Lieut.-Governor Bihar and Orissa since 1915; *b.* 16 August 1863. *Educ.*: University College, London; entered I.C.S., 1882; Census Commissioner for India, 1903; Financial Secretary and Member of Legislative Council of Bengal, 1905; Commissioner of Chhota Nagpur, 1905; Chief Secretary to Government of Bengal, 1907; Census Commissioner of India, 1909. *Address*: Government House, Ranchi, Chhota Nagpur.

GALES, SIR ROBERT RICHARD, Kt., F.C.H., M.Inst. C.E., M.Am. Soc. C.E.; Agent, North-Western Railway, since 1917; *b.* 31 Oct. 1864. *Educ.*: privately; Royal Indian Engineering College, Coopers Hill. Appointed to Railway Branch of the Indian P. W. D., 1886; on arrival in India in 1887 was employed on various projects in Punjab; appointed Assistant Manager, North Western Railway, 1895, and subsequently Assistant Manager, East Coast Railway, and Deputy-Manager, Eastern Bengal Railway; Engineer-in-Chief, Curzon Bridge over the Ganges at Allahabad 1903; after conducting

reconnaissance of Bombay Sind Railway Connection became Engineer-in-Chief, Coonoor Ootacamund Railway, 1906; Engineer-in-Chief of Hardinge Bridge over Lower Ganges at Sara, 1908; Chief Engineer with Railway Board, Govt. of India, 1915-17. *Address*: Lahore.

GANDHI, MOHANDAS KARAMCHAND, Bar.-at-law (Inner Temple), *b.* 2nd October 1869. *Educ.* at Rajkote, Bhavnagar, and London. Practised law in Bombay, Kathiawar, and South Africa. Now occupied with farming and weaving. *Publications*: "Indian Home Rule," "Universal Dawn." *Address*: Satyagrahashram, Sabarmati.

GANGA RAM, C.I.E., M.V.O., Rai Bahadur, M.I.M.E., M.I.C.E.; *b.* 1851. *Educ.*: Thomason College. Entered P. W. D. 1873; Executive Engineer, 1883; Supdt., Coronation; Durbar Works, Delhi, 1903; retired, 1903; Supdtg. Engineer, Patiala State; retired, 1911; Consulting Engineer, Delhi Durbar, 1911. *Address*: Lahore.

GEOGHEGAN, LT.-COL. FRANCIS EDWARD, C.I.E. Director of Supplies, G. H. Q., India. *b.* 14 August, 1869. *Educ.*: St. Charles College and R. M. C. Sandhurst; *m.* Miss L. L. Munn, 2nd Lt., Gloucestershire Regiment, 1889, Indian Army, 1891. Served in N. W. Frontier Campaign, 1897; China, 1900; European War, 1914-18 (despatches). *Address*: C-o. Messrs. King, King & Co., Bombay.

GEORGE, EDWARD CLAUDIUS SCOTNEY, C.I.E.; Dy. Commissioner, Ruby Mines, Burma; *b.* 1865. *Educ.*: Dulwich College. Asst. Commissioner, 1887-90; Officiating Dy. Commissioner, Bhamo, 1890-97; Sub-Commissioner, Burmo-China Boundary Commission, 1897-99. *Address*: Ruby Mines, Burma.

GHOSAL, MRS. (SRIMATI SVARNA KUMARI DEVI); *d.* of Maharshi Debendra Nath Tagore, and sister of Sir Rabindranath Tagore; *b.* 1857; *m.* late J. Ghosal, Zemindar. Before twenty published a novel anonymously; soon after became editor of Bharti (first woman editor in India), a Bengali magazine which she still conducts. *Address*: Old Ballygunge Road, Calcutta.

GHOSE, THE HON. MR. JUSTICE CHARU CHUNDER, Judge, Calcutta High Court, since July, 1919. *b.* 4 February 1874. *Educ.*: Presidency College, Calcutta; *m.* Nirmal Nolini, *d.* of the late Protap Chunder Bhose. Vakil, Calcutta, 1898. Called to the Bar in England, 1907. *Address*: High Court, Calcutta.

GHOSE, SIR RASHBEHARY, Kt., C.S.I., M.A., D.L., C.I.E.; Member, Viceregal Council. *b.* 1845. *Educ.*: Presidency College, Calcutta. D.L. 1884. Tagore Law Professor, Calcutta University, 1876. Fellow, 1879; Member of Bengal Leg. Council, 1888-91. Imp. Council, 1891-94; re-nominated, 1906. *Address*: Sans-Souci, Alipore.

GIBBES, REGINALD PRESCOTT, Govt. Emigration Agent for all British Colonies at Calcutta, since 1914; *b.* 1867. *Educ.*: St. Edward's School, Oxford. Germany; France; Italy; Spain. Entered Col. C. S., 1889;

- Cadet, Straits Settlements, transferred to Calcutta, 1900, as Assist. Emigration Agent for Trinidad, Fiji, Jamaica, and Mauritius. Emigration Agent, 1903. *Address*: 61, Garden Reach, Calcutta.
- GIBBONS, THOMAS CLARKE PILLING, K. C.;** Advocate-General, Bengal, since 1917. *b.* 1868. Admitted a Solicitor, 1891; called to Bar; Inner Temple, 1897. *Address*: 2, Mitre Court Buildings, Temple, E. C.; High Court, Calcutta.
- GIDHOUR, MAHARAJ KUMAR CHANDRA MOUL-ESSHUR PRASAD SING;** *S. & H.* of Maharaja Sir Ravneswar Prasad Sing Bahadur of Gidhour. *b.* 1890. *m.* 1913. Member, District Board; Vice-Chairman, Local Board. *Address*: Gidhour, Monghyr, Behar.
- GIDHOUR, MAHARAJAH SIR RAVNESWAR PRASAD SINGH, BAHADUR OF, K.C.I.E.;** premier nobleman in Bihar and Orissa. *b.* 1860; *m.* 1886. Member of Bengal Leg. Council, 1893-95 and 1895-97. 3rd time, 1901-03; 4th time, 1903. Life Vice-President. B.L. Association; title of Maharajah Bahadur made hereditary, 1877. Hon. Member of Leg. Council of new Province, 1913. *Address*: Gidhour, Monghyr, Behar.
- GIDNEY, HENRY ALBERT JOHN, LT.-COL., I.M.S. (retired); F.R.C.S.;** F.R.S.; D.O. (Oxon.); D. P. H. (Cantab.); Ophthalmic Surgeon. *b.* 9 June, 1873; *Educ.*: at Calcutta, Edinburgh R. College, University College Hospital, London, Cambridge and Oxford. Entered I.M.S., 1898. Served in China Expedition, 1900-01; N. E. Frontier, 1913; N. W. Frontier, 1914-15 (wounded). *Publications*: numerous works on Ophthalmic Surgery. *Address*: Chowpatty Sea Face, Bombay.
- GIFFARD, MAJ.-GENERAL GERALD GODFRAY, C.S.I., M.R.C.P., M.R.C.S.;** Surgeon-General with the Government of Madras; Honorary Surgeon to H. M. the King. *b.* 1867. *Educ.*: St. Bartholomew's Hospital, Captain I.M.S., 1890; Lt.-Col., 1910; Resident Surgeon, General Hospital, Madras, 1897; Sanitary Officer, Chingleput, 1899; Professor, Materia Medica, Medical College, 1901; Professor, Surgery, 1903. Served European war, Commandant, Hospitalship Madras, 1915-17. *Address*: Madras.
- GILLAN, SIR ROBERT WOODBURN, K.C.S.I., C.S.I.;** *b.* 1867; *m.* 1889, Mary *o. d.* of Wm. van Bearle. *Educ.*: Ayr; Christ's College, Cambridge. Joined I. C. S., 1888; attached to U. P., filling executive and chiefly revenue posts. Sec. to the Board of Revenue, 1902; Fin. Sec. to Govt., 1907. Compt. and Aud. Gen., 1910. Fin. Sec. to the Govt. of India, 1912. Member of Royal Commission on Indian Finance and Currency, 1913. Member, Railway Board, 1914, and President, 1915. *Address*: Simla and Delhi.
- GILMORE, THE REV. DAVID CHANDLER, D.D.,** Principal, Judson College, Rangoon, since 1917; *b.* 29 August 1866. *Educ.*: Rochester University U.S.A. *m.* Gertrude Price Clinton. Prof. in Judson College, 1890-96; Missionary at Tavoy and Henzada, 1897-1905; Prof. in Judson College, 1908-17. *Publications*: Elementary Grammar in Sgaw Karen; Harmony of the Gospel in Sgaw Karen; The End of the Law. *Address*: Rangoon.
- GLANCY, REGINALD ISIDORE ROBERT, C.I.E.;** Asst. Min. of Fin., H. H. Nizam's Govt.; since 1911. *Educ.*: Clifton College; Christ Church, Oxford. Entered I. C. S., 1896; Settlement Officer, Bannu, 1903. Political Agent, 1907. First Asst. Resident, Hyderabad, 1909. *Address*: Hyderabad.
- GLANVILLE, BRIG.-GEN. FRANCIS, D.S.O.;** Commanding Bareilly Brigade, I. A.; *b.* 1862; Entered R. E., 1881; Bt.-Col., 1909; Col., 1911; Brig.-Gen., 1916; served Burma, 1886-88. *Address*: Bareilly.
- GODLEY, JOHN CORNWALLIS, C.S.I.;** Director of Pub. Inst., Punjab, and Member of Prov. Leg. Council; *b.* 1861; *Educ.*: Marlborough; Corpus Christi College, Oxford. *Address*: Lahore.
- GOLDIE, MAJ. KENNETH OSWALD,** Military Secretary to the Government of Madras, since 1919; *b.* 19 September 1882. *Educ.*: Wellington and R. M. C. Sandhurst. Commissioned 1901. Joined 10th Lancers, 1902. Extra A. D. C. to the Viceroy, 1908. A. D. C. to the Governor of Bombay, 1913-16. Served in Mesopotamia, 1916-19. *Address*: Government House, Madras.
- GOLDSMITH, REV. MALCOLM GEORGE,** Missionary of C.M.S. in Madras and Hyderabad, Deccan; *b.* 1849. *Educ.*: Kensington Proprietary Grammar School; St. Catherine's College, Cambridge. Ordained, 1872; C.M.S. Missionary, Madras, 1872-73; Calcutta, 1874-75; Principal, Harris School, Madras, 1883-91; Hyderabad, 1891-99; Hon. Canon, St. George's Cathedral, Madras, 1905. *Address*: Royapet House, Royapettah, Madras.
- GONDAL, HIS HIGHNESS THAKORE SAHEB OF BHAGWAT SINHJEE, G.C.I.E.;** K.C.I.E., *b.* 1865; *s.* of late Thakore Saheb Sagarmji of Gondal; *m.* 1881, Nandkuberba, C. I., *d.* of H. H. Maharana of Dharampore. *Educ.*: Rajkumar Coll., Rajkot; Edin. Univ. Hon. LL. D. (Edin.) 1887; M. B. and C. M. (Edin.) 1892; M.R.C.P. (Edin.) 1892; D. C.L. (Oxon.) 1892; M. D. (Edin.) 1895; F.R.C.P. (Edin.) 1895; F.C.P. and S. B. 1913; Fellow of University of Bombay, 1885; F.R.S.E., 1909; M.R.A.S., M.R.I. (Great Britain and Ireland). *Publications*: Journal of a Visit to England; A Short History of Aryan Medical Science. *Address*: Gondal, Kathiawar.
- GOODIER, THE VERY REV. ALBAN, R.C. ARCHBISHOP OF BOMBAY** since 1919, *b.* at Preston, 14 April, 1869. *Educ.*: Stonyhurst and Oxford. Entered the Society of Jesus, 1887. Planned and partly carried out "The Catholic Library." Joined the staff of St. Xavier's College, Bombay, 1914. Rector and Principal of that College, 1916. *Address*: Bombay.
- GORDON, FRANCIS FREDERICK,** proprietor and editor of *Advocate of India* and Marathi journal *Jagad-Vritta*; *b.* 1866. Went to India on literary staff of *Bombay Gazette*, 1890; purchased *Advocate of India*, 1894. *Address*: *Advocate of India*, Bombay.

GOURLAY, WILLIAM ROBERT, C.I.E.; I.C.S.; Priv. Secy. to Gov. of Bengal, since 1912; *b.* 1874; *Educ.*: Glasgow University; Jessu Coll., Cambridge. Ent. I.C.S., 1897; served in Bengal and Bihar; Registrar of Co-operative Credit Societies, 1905; Director of Agriculture, 1907; Magistrate and Collector, 1912. *Address*: Govt. House, Calcutta.

GRACEY, HUGH KIRKWOOD, C.B.E. (1919), I.C.S.; *b.* 23 November 1868. *Educ.*: City of London School; St. Katharine's College, Cambridge. *m.* Mabel Alice, *d.* of the late G. F. Barrill. Commissioner of Gorakhpur; since 1916. *Publication*: Settlement Report of Cawnpore. *Address*: Gorakhpur, U. P.

GRAHAM, REV. JOHN ANDERSON, M.A. (Edin.) D.D. (Edin.), C.I.E.; Missionary of Church of Scotland, at Kalimpong, Bengal, since 1889; Hon. Supdt. of St. Andrew's Colonial Homes; *b.* 1861. *Educ.*: Cardross Parish School; Glasgow High School; Edinburgh University. Was in Home C.S. in Edinburgh, 1877-82; graduated, 1885; ordained, 1889. *Address*: Kalimpong, Bengal.

GRANT, SIR ALFRED HAMILTON, C.S.I., C.I.E.; Ch Commr., N.W.F. Province, 1919; *b.* 1872; 2nd *surv.* s. of late Sir Alexander Grant, 10th Bart. of Balvey, and *heir-pres.* to his brother. *Educ.*: Fettes College, Edinburgh; Balliol Coll., Oxford. Ent. I.C.S., 1895; served as Asst. Commr., Junior and Senior Secy. to Financial Commr., in Punjab; Dy. Commr. of various Frontier districts, Secy. to Frontier Administration; accompanied Dane Mission to Kabul, 1904-5; British Representative at conclusion of peace with Afghanistan, 1919. *Address*: Government House, Peshawar.

GREAVES, HON. WILLIAM EWART; Judge of Calcutta High Court, since 1914; *b.* 1869; *Educ.*: Harrow; Keble College, Oxford. Asst. Master at Evelyns, nr. Uxbridge, 1894-99; called to Bar, Lincoln's Inn, 1900. *Address*: 2, Short Street, Calcutta; 38, Marlborough Place, N. W.

GREGSON, EDWARD GELSON, C.I.E., Supdt. of Police, N. W. F. Prov.; *b.* 1877. *Educ.*: Portsmouth Grammar School. Asst. Blockade Officer, Waziristan, 1900; Poll. Officer, Mohmand Border, 1908; Commndt., Border Military Police, Peshwar, 1902-07; Per. Asst. to Inpsr.-Gen. of Pol., N. W. F., 1907-9; on special duty, Persian Gulf, 1909-12; Commissioner of Police, Mesopotamia. *Address*: Peshawar.

GREIG, LT.-COL. JOHN GLENNIE, C.I.E. (1911), Military Sec. to the Governor of Bombay; *b.* 24 October 1871. *Educ.*: Ushaw College and Downside, R. M. C. Sandhurst. Joined L. N. Lancs. Regiment, 1892; Indian Army, 1895. Served in Mohmand Campaign, 1897; Tirah, 1897-98; Somaliland, 1902-04; Mahsud Campaign, 1917; Palestine, 1918; A. D. C. to Lords Sandhurst, Northcote and Lamington; Military Sec. to Lord Sydenham, Lord Willingdon, and Sir George Lloyd. *Address*: Government House, Bombay.

GREY, LT.-COL. WILLIAM GEORGE, I. A.; Poll. Dept., Govt. of India; Consul-Gen.

for Khorassan, since 1916; *b.* Wellington, New Zealand, 1866. *Educ.*: Westward Ho, N. Devon. Joined army 1886; served Natal, Straits Settlements, and Gibraltar; transferred to I. A., 1889; transferred to Pol. Service as Vice-Consul, Bandar Abbas, 1902; served as Pol. Agent at Maskat, Oman, Arabia, 1904-8; permanently appointed to Poll. Dept., Govt. of India, 1906; Pol. Agent, Koweit, P. G., 1914-16; served in Mysore, Calcutta, and Baluchistan. *Address*: Meshed, P. G.

GRIFFITH, FRANCIS CHARLES, O.B.E. (1919), King's Police Medal (1916); Commissioner of Police, Bombay, since 1919; *b.* 9 November 1878; *m.* Ivy Morna, daughter of George Jacob, I.C.S. *Educ.*: Blundell's School, Tiverton. Joined Indian Police, 1898. *Address*: Head Police Office, Bombay.

GRUNING, JOHN FREDERICK, C.I.E., 1915; Commissioner of Orissa, *b.* 1 October 1870; *m.* to Mabel Lydia (Baker). *Educ.*: Eastbourne College, and St. John's College, Camb. Member of Legislative Council, Bihar and Orissa. *Publications*: Gazetteer of Jalpaiguri: A Pamphlet on Emigration to the Tea Gardens of Assam, Lalbagh, Cuttack, Orissa.

GUBBAY, MOSES MORDECAI SIMEON, C.I.E., I.C.S.; Controller of Currency, *b.* Shanghai, 1876. *Educ.*: Clifton; Caius College, Cambridge. Appointed I.C.S., 1898. Under Secy. to Govt. of India, Commerce Dept., 1906-10; Collr. of Customs, Bombay, 1910-1915; Wheat Commissioner for India, 1915; Controller of Food Stuffs, 1918. *Address*: Simla.

GUPTA, SIR KRISHNA GOVINDA, K.C.S.I., C.S.I.; Bar-at-Law, Middle Temple, 1873; late I.C.S.; *b.* 1851. *Educ.*: Mymensing Govt. School; Dacca Coll.; London University Coll. Joined I.C.S., 1873; passed through all grades in Bengal; Secy., Board of Rev. 1887; Commr. of Excise, 1893; Divl. Commr. 1901; Member to Board of Rev., 1904, being first Indian to hold that appointment; Member, Indian Excise Committee, 1905; on special duty in connection with Fisheries of Bengal, 1906; deputed to Europe and America in 1907 to carry on fishery investigation; nominated to Indian Council, 1907; being one of two Indians who were for first time raised to that position; retired from India Office on completion of term, March 1915.

GURDON, LIEUT.-COLONEL PHILIP RICHARD THORNBAGH, C.S.I., M.R.A.S., Commissioner of the Assam Valley Districts, *b.* 2 February 1863; *m.* to Ada Elizabeth McNaught. Educated at Charterhouse School, Godalming and the R. M. C., Sandhurst. In military employ from 1882 till 1886; after which served in the Assam Commission as Assistant Commissioner, Deputy Commissioner and Commissioner of a division, also as Superintendent and Honorary Director of Ethnography; Vice-President, Council of the Chief Commissioner of Assam since 1916. *Publications*: The Khasis, A short note on the Ahoms; has contributed articles to the Journal of the Royal Asiatic Society and

to the Encyclopædia of Religions and Ethics.
Address : Gauhati, Assam.

GWALIOR, H. H. MAHARAJAH SINDHIA OF, G.C.V.O., G.C.S.I., Hon. LL.D., Camb. D.C.L. Oxon; Hon. and Extra A.D.C. to King; Hon. Col., 1st D. & O. Lancers, 1906; Hon. Maj.-Gen.; *b.* 20 Oct. 1876; *S.* 1886; Made Hon. Col., British Army, 1898; Maj.-Genl.; went to China as Orderly Officer to General Gaselee, 1901; provided expedition with hospital ship; salute of 21 guns. Was chiefly responsible for the purchase and upkeep of the hospitalship *Loyalty*, 1914-18. Address : Gwalior, C.I. Sipri, C.I.

HAFFKINE, WALDEMAR MORDECAI WOLFF, C.I.E.; Bacteriologist with Govt. of India; *b.* Odessa 15 (3) Mar. 1860. Educ.: Classical Coll., Berdiansk (Southern Russia), 1872-79; and Odessa University, Faculty of Science, 1879-83. Engaged research work at Zoological Museum, Odessa, 1883-88; Asst. Professor of Physiology, Geneva Medical School, Switzerland, 1888-89; Asst. to Pasteur, Paris, 1889-93; on bacteriological research duty, India, since 1893. Cameron Prize in Practical Therapeutics, University of Edinburgh, 1900; Mary Kingsley Medal, 1907; Academie des Sciences Prize, Paris, 1909. Decorated for research work in India. Address : Pasteur Institute, Paris; Govt. of India Biological Laboratory, Calcutta.

HAIG-BROWN, WILLIAM ALBAN, Banker (Partner, Messrs. King, King & Co., and King Hamilton & Co.), *b.* 31 May 1870. Educ.: Winchester College. Continuously from 1888 in the employ of Henry S. King & Co., London and King King & Co., Bombay, until 1911, when became a partner. Address : Khatao Mansions, Wellington Lines, Bombay.

HAILEY, HAMMET REGINALD CLODE, C.I.E.; Director of Land Records and Agriculture, U.P. since 1912; Member of Lieut.-Governor's Council. Educ.: Merchant Taylor's School; St. John's College, Oxford. Entered I.C.S., 1892; Jt. Mag., 1899; Dy. Commr., 1905; Jt. Sec., Board of Revenue, 1906. Address : Oudh.

HAILEY, HON. WILLIAM MALCOLM, C.S.I., C.I.E.; I.C.S.; Finance Member, Government of India, 1919. *b.* 1872; *m.* 1896, Andreina, *d.* of Count Hannibale Balzani, Italy. Educ.: Merchant Taylor's School; Corpus Christi College, Oxford (Scholar). Jun. Sec., Financial Commr., 1898; Colonisation Officer, Jhelum Canal Colony, 1902; Sec., Punjab Govt., 1907; Dy. Sec., Govt. of India, 1908; Member, Durbar Committee, 1911; Member, Imp. Leg. Council, 1912. Ch. Commr., Delhi, 1912-19. Address : Delhi.

HAKSAR, LT.-COL. KAILAS NARAIN, C.I.E., Mahsir-Khao-Bahadur; Pol. Member, Gwalior Durbar, since 1912; *b.* 1878. Educ.: Victoria College, Gwalior, Allahabad University; Hon. Prof. of History and Philosophy, 1899-1902; Priv. Sec. to Maharaja Scindia in 1903-12; Under Sec., Pol. Dept., on dep. 1905-7; Capt. 4th Gwalior Imp. Ser. Inf., 1902; Lt.-Col., 1910; Sen. Member Board of Revenue, 1910-13. Address : Gwalior.

HALL, HAMMOND; b. 1837. Educ.: Bedford Grammar School; Blackheath Proprietary School; King's Coll., Lond. Studied colliery and railway engineering, 1876-82; Asst. Editor, Birmingham *Daily Times*, 1884-87; Sub-editor, *Sunday Times*, 1887-89, Chief Sub-editor of *Daily Graphic*, 1890-91; Editor, 1891-1907; Editor *Hazell's Annual*, 1900-13; on staff of *Statesman*, since 1913. Address : *Statesman* Office, Calcutta.

HALL, MAJOR RALPH ELLIS CARR, C.I.E., I.A., Milv. Accts. Dept., Field Controller, Poona; *b.* 1873. Joined army, 1894; Major, 1912; served Tirah, 1897-98; European War, 1914-17. Address : Field Controller, Poona.

HALLIDAY, FRANCIS CHARLES TOLLEMACHE, M.V.O.; Dy. Commr. Ind. Police. Address : Indian Police Headquarters, Calcutta.

HAMILTON, C. J., M.A., F.S.S.; Minto Professor of Economics, Calcutta University, since 1913; Fellow of Calcutta University; *b.* 1873. Educ.: private tutor; King's College, London; Caius College, Cambridge; graduated first class Moral Science Tripos, 1901; Member of Mosely Educational Commission to U.S.A., 1903; Member of Inner Temple, 1903; Dunkin Lecturer at Oxford University. Address : The University, Calcutta.

HANKIN, ARTHUR CROMMELIN, C.S.I., C.I.E.; Inspector-General of Police and Jails, Hyderabad, since 1896; *b.* 1859; Joined C.P. Police, 1878; Dist. Supdt. of Police, 1881-1888 and 1890-91; on dep. in connection with Dacoity operation in the Bundlekhand Agency; served in operations for suppression of Thugi and Dacoity in Central India, 1894-96. Member of Indian Police Commission, 1902-3; Dy. Insp.-Gen. of Police in C.P., 1906; retired from British service, 1914. Address : Hyderabad.

HANKIN, ERNEST HANBURY, M.A., D. Sc.; Chemical Examiner, U. P. and C. P., since 1892; *b.* 1865. Educ.: Merchant Taylor's School; Univ. Coll., London; St. Bartholomew's Hospital, London; St. John's Coll., Cambridge; Koch's Laboratory, Berlin; Institute Pasteur, Paris. Address : Agra.

HARI KISHAN KAUL, RAI BAHADUR PANDIT, M.A., C.I.E.; *b.* 1869; *s.* of Raja Pandit Suraj Kaul, C.I.E. Educ.: Govt. Coll., Lahore. Asstt. Commr., 1890; Jun. Secy. to Financial Commr., 1893-97; Settlement Officer, Muzaffargarh, 1898-1903; Mainwali, 1903-8; Dy. Commr., 1906; Dy. Commr. and Supdt., Census Operations, Punjab, 1910-12; Dy. Commr., Montgomery, 1913; on special duty to report on Criminal Tribes, Dec. 1913-April 1914, and since March 1916. Address : Abbott Road, Lahore.

HARNAM SINGH, THE HON. RAJA SIR, K.C.I.E.; *b.* 15 Nov. 1851; *y. s.* of late H. H. Raja Rajgan Sir Raja Randher Singh, Bahadur of Kapurthala, G.C.S.I. Educ.: Kapurthala. Served as member of Hemp Drugs Commission in 1893-94; and is Hon. Life Secy. to B. I. Association of Talukdars of Oudh and Fellow of Punjab University, was member of Imp. Leg. Council and afterwards of Punjab Leg. Council, 1900-2; created Raja, 1907. Address : Simla or Lucknow or Jullundur City.

- IARRIS, LEONARD TATHAM;** *Educ.* Fa'mouth Grammar School; Bath College; New College, Oxford. Entered I.C.S., 1891; Dist. Magte, and Coll., Bangalore 1899; Head Asst., 1902; Commissioner, Coorg, 1905-12.
- HARRISON, ALBERT JOHN, C.I.E.,** Manager, Meckla Nuddee Sawmills, Dibrugarh, Assam since 1902; *b.* 1862; *Educ.* Rugby; Harrow. Joined Jokai Tea Co. as Engineer, 1890; managed Tippuk Tea Garden, 1895-1902. *Address:* Dibrugarh, Assam.
- HART, GEORGE SANKEY, C.I.E.;** Insp.-Genl. of Forests to Govt. of India, since 1913; *b.* 1866. *Educ.* St. Paul's School; Wren and Gurney; R.I.E. College, Cooper's Hill, Asst. and Dy. Conservator of Forests, Punjab, 1887-1906; Conservator of Forests, C. P., 1906-08; Bengal, 1908-10; Chief Conservator of Forests, C. P., 1910-13. *Address:* Simla.
- HARTLEY, LEWIS WYNNE, J.P., C.I.E. (1918);** Collector of Income Tax, Bombay, *b.* 1867; *m.* to Annie, *d.* of William Rowlands, Rofft, Bangor, Wales. Educated at private school, Assistant to Messrs. Gaddum Bytell & Co., Cotton Merchants, Bombay, 1889-1900. appointed Presidency Inspector of Factories, Bombay Presidency, Sind and Central Provinces, 1901; Collector of Income-Tax for the City and Island of Bombay, 1906. *Address:* Bombay Club, Bombay.
- HARTNOLL, SIR HENRY SULIVAN, Kt.;** Chief Judge, Court of Lower Burma, since 1906; Barrister, 1898. *Educ.* Exeter Grammar School; Trinity College, Oxford. Entered I.C.S., 1881; served in Burma as Asst. Commissioner; Dy. Commissioner, 1890; Commissioner, 1902. *Address:* Chief Court, Rangoon.
- HATCHELL, THE REV. CHRISTOPHER FREDERIC WELLESLEY,** Acting Archdeacon of Bombay, since 1918. *b.* 24 February 1868. *Educ.* Bedford School and Christ's College, Cambridge. *m.* Ella D'Arcy, *d.* of the late Captain G. B. Kirwan. Ordained 1891. A. C. S., Bhusawal, 1896. Bombay Ecclesiastical Department, 1900-08. Madras, 1908-17. Bombay, 1917. *Address:* Bishop's Lodge, Malabar Hill, Bombay.
- HATWA, MAHARAJA BAHADUR GURU MAHADEV ASRAM PRASAD SAHI OF;** *b.* 19 July 1893; *S.* Oct. 1896 to the *Gadi* after death of father Maharaja Bahadur Sir Kishen Pratap Sahi, K.C.I.E., of Hatwa. *Address:* Hathuwa P. O., District Saran, Behar and Orissa.
- HAY, MAJOR WESTWOOD NORMAN, C.I.E.;** I. A.; Commandant Zhoib Militia, Baulchistan; *b.* 1871. Entered R. A., 1891; Major, 1909; D.A.A.G., India, 1909-11; served China, 1900. *Address:* Headquarters, Zhoib Militia, Baluchistan.
- HAY, SIR LEWIS JOHN ERROLL;** 9th Bt. of Park, *cr.* 1663; Indigo Planter; *b.* Stirling N.B., 17 Nov. 1866; *e. s.* of 8th Bt. and *d.* of John Brett Johnston of Ballykilbeg, Co. Down; *S.* father 1889; *Address:* Dooriah, Motipur, Behar.
- HAY, ALFRED, D. Sc.;** Professor of Electrical Technology, Indian Institute of Science, Bangalore; *b.* Russian Poland, 1886; *Educ.* School education received at one of Warsaw
- "Gymnasia," University of Edinburgh, B. Sc., 1891; studied electrotechnology in London under the late Prof. Ayrton at Central Technical College; Demonstrator in Electrical Engineering at Univ. Coll., Nottingham, 1892; Lecturer on Electro-Technics at Univ. Coll. Liverpool, 1896-1901; graduated D. Sc., 1901; Professor of Electro-Technology, Cooper's Hill, 1901-04; Head of Physics and Elec. Eng. Dept., Hackney Technical Institute, London, 1904-08. *Address:* Indian Institute of Science, Bangalore.
- HAYDEN, HENRY HUBERT, C.S.I., 1919;** C.I.E.; B.A., B.A.I., F.G.S., F.R.S., Hon. D. Sc. Calcutta; Director, Geological Survey of India; *b.* 1869. *Educ.* Hilton College, Natal; Trinity College, Dublin. Joined Geological Survey of India, 1895; attached to Tirah Exp. Force, 1897-98; Tibet Frontier Commission, 1903-04; services lent to Amir of Afghanistan, 1907-08. *Address:* Geological Survey of India, Calcutta.
- HAYWARD, MR. JUSTICE MAURICE HENRY WESTON, I.C.S., LL.B. (Cantab.),** Bar-at-Law, Judge, High Court, Bombay, *b.* 2 June 1868; *s.* of the late R. B. Hayward, Esq., F.R.S., of the Park, Harrow, *m.* to Alice Christine, *d.* of the late Judge Barber, Q.C., of Ashover, Derbyshire. *Educ.* Harrow School and St. John's College, Cambridge. Assistant Collector, Bombay, 1889; Under-Secretary to Bombay Government, 1895; Judicial Assistant, Kathiawar, 1897; District Judge, Karachi, 1899; Legal Remembrancer and Secretary to Government, 1905; Additional Judicial Commissioner, Sind, 1907; Acting Judicial Commissioner, Sind, 1909, 1913 and 1916; Ag. Judge High Court, Bombay, 1911, 1914 and 1915; Judge, High Court, Bombay, 1918. *Address:* Yacht Club or High Court, Bombay.
- HEATON, HON. SIR JOSEPH JOHN, Kt. (1915);** Judge, High Court, Bombay, since 1908; *b.* April 1860; *Educ.* Bradford Grammar School; King's Coll., Cambridge. Entered I.C.S., 1881; Priv. Secy., Govr. of Bombay, 1895-8; Judge and Sessions Judge, 1898; Addtl. Judicial Commissioner, Sind, 1906; Judicial Commissioner, 1907. *Address:* Malabar Hill, Bombay.
- HENDERSON, ROBERT HERriot, C.I.E.;** Supdt. of Tarrapur Company's Tea Garden, Cachar, Assam; Chairman, Ind. Tea Assoc., Cachar and Sylhet. Represented tea-planting community on Imp. Leg. Council, 1901-2, when legislation regulating supply of indentured coolie labour was under consideration. *Address:* Cachar, Assam.
- HENRY, WILLIAM DANIEL, C.I.E.;** Manager, Alliance Bank of Simla, Ltd., Simla, and Colonel Commanding Simla Rifles, I.D.F., V.D.; A.D.C.; *b.* 1855. *Educ.* Dr. J. Yeats' School, Peckham. *Address:* Kelvin Grove, Simla.
- HEPPER, SIR (HARRY ALBERT) LAWLESS, Kt. (1918),** Agent, G. I. P. Railway, since 1911. *b.* 30 January 1870. *m.* Kathleen Florence Keelan. *Educ.* Rossall and R. M. A. Woolwich. Commissioned in Royal Engineers, 1890. Joined N. W. Railway 1894.

- Served with Chitral relief expedition, 1895. Deputy Agent, G. I. P. Railway, 1906. Retd. from Army, 1912. President, Indian Railway Conference Association, 1916-17; Controller of Munitions, Bombay, May 1917 to August 1918. *Address*: Mount Pleasant Road, Malabar Hill, Bombay.
- HERTZ, HENRY FELIX, C.I.E., F.R.G.S.;** Barrister; In charge of Civil Police, Burma. *b.* 1863; *g. s.* of Bishop Hertz, of Ribe, Denmark. *Educ.*: St. Xavier's College, Calcutta. Took active part in operations round Mandalay, 1886-87, and in Shan States, 1887-90; in operations 1890-1900, in Kachin Hill and Chinese Frontier. *Address*: Bassein, Burma.
- HERTZ, WILLIAM AXEL, C.S.I., J.P., F.R.G.S.;** Burma Commission, Dy. Commr., Fort Hertz, Burma, *b.* Moulmein, 1 Oct. 1859; *g. s.* of Bishop Hertz of Ribe, Denmark. *Educ.*: St. Xavier's College, Calcutta. Joined Burma Provl. C. S., 1886; served as Pol. Officer, Burma War, 1886-89; against dacoits 1889-90; promoted to Burma Commission Settlement Officer, Magwe, 1900-3; in charge of Hpimaw Expedition, 1910-11 (thanked by Government of India). *Address*: Putao Hkamti Long, Burma.
- HICKLEY, VICTOR NORTH, C.I.E., V.D.;** Lieut.-Col., Behar Light Horse; A. D. C. to Lt. Govr., Behar and Orissa; indigo planter in Behar. *Educ.*: Eton; Exeter College, Oxford. *Address*: Mozufferpore.
- HIGHET, SIR ROBERT SWAN, Kt., M.I.C.E.;** Agent, E. I. Ry., since 1912; *b.* 1859; *m.* 1886, Violet Gibson, *d.* of late Charles Forgan, Towerhill, Ayrshire. *Educ.*: Ayr Academy. Pupil and Assistant to John Strain, Civil Engineer and Vice-President, I.C.E.; joined E. I. Ry., 1883; Ch. Engr., 1903. *Address*: E. I. Ry. House, Calcutta.
- HIGNELL, SIDNEY ROBERT, C.I.E.; I.C.S.;** Offg. Sec. to Govt. of India, Home Dept., since 1918. *Educ.*: Malvern; Exeter College, Oxford. Entered I.C.S., 1896; Magte. and Coll., 1912. *Address*: Home Dept., Govt. of India, Delhi.
- HILL, SIR CLAUDE HAMILTON ARCHER, K.C.S.I., C.S.I., C.I.E.;** Ordinary Member, Council of Govr. Gen. of India, since 1915; *b.* 21 Sep. 1866; *m.* 1892, Frances May, *d.* of Sir Raymond West. *Educ.*: St. Mark's School Windsor; Emmanuel Coll., Cambridge. Joined I.C.S., 1887; Under Secy. to Bombay Govt., 1892; Under Secy. to Govt. of India in Home Dept., 1895-97; First Asst. Resident at Hyderabad, 1897-99; Priv. Secy. to H. E. Lord Northcote Govt. of Bombay, 1899-1903; Dy. Secy. to Govt. of India, Foreign Dept., 1903-1904; Political Sec. to Govt. of Bombay, 1904-6; Resident, Mewar, 1906-8; Agent to Gov. in Kathiawar, 1908-12; Ord. Member, Executive Council, Bombay, 1911-15. *Address*: Peterhof, Simla.
- HILL, MONTAGUE, C.I.E.;** Chief Conservator, C. P., since 1913. Joined I. F. D., 1887; Conservator, Burma, 1906; Offg. Insp. Gen. of Forests, India, 1914. *Address*: Pachmarhi, C.P.
- HOGG, SIR MALCOLM NICHOLSON, Kt. (1920);** Manager, Forbes, Forbes Campbell & Co., Ltd., Bombay. *b.* 17 January 1883, *m.* Lorna, younger *d.* of Sir Frank Beaman. *Educ.*: Eton and Balliol College, Oxford. Joined London Office of Forbes, Forbes Campbell & Co., Ltd., in September 1904, came to Bombay, February 1905; succeeded to managership, Bombay branch, 1912; Deputy Chairman, Bombay Chamber of Commerce and Member, Legislative Council of the Governor of Bombay, 1915-16 and 1916-17; Chairman, Bombay Chamber and Member, Legislative Council of Viceroy, 1917-18 and 1918-19; Director, Bank of Bombay (President, 1918); Member of Board of Trustees of Port of Bombay etc.. Member of Franchia Committee under Montagu-Chelmsford Scheme, 1918. *Address*: Forbes Building, Horn Street, Bombay.
- HOLE, ROBERT SELBY, C.I.E. (1919);** Indian Forest Department. *b.* 15 January 1875. *Educ.*: Clifton College and Cooper's Hill. *m.* Beatrice Mary, *d.* of Surg.-General B. P. Rooke. Joined Forest Department, 1896, Forest Botanist, Forest Research Institute, Dehra Dun, since 1907. *Address*: Dehra Dun, U. P.
- HOLLAND, ROBERT ERSKINE, C.I.E., I.C.S.;** Political Department, Government of India. *b.* 1873; *s.* of Sir Thomas Holland, K.C. *Educ.*: Winchester; Oriel Coll., Oxford. Entered I.C.S.: 1895; Secretary, Board of Revenue, Madras, 1903; served Foreign Department of Govt. of India, 1904-08; Political Agent and Consul at Muscat, 1908-10; Political Agent, Eastern States, Rajputana, 1911-13; Depy. Secy., Govt. of India, 1914. On political duty with Mesopotamia Field Force, 1915 and 1917. *Address*: c-o Grindlay & Co., Bombay.
- HOLLAND, SIR THOMAS HENRY, K.C.I.E., Hon. D.Sc.;** Calcutta and Melbourne; F.R.S., F.G.S.; President, Institution Mining Engineers; President, Indian Industrial Commission, 1916; President, Board of Munitions, India, 1917; Actg. Secy., Commerce and Industry Dept., Government of India, 1913; Member of Council Institution Mining and Metallurgy; Vice-President, Institution of Petroleum Technologists; Professor of Geology and Mineralogy, Manchester University, since 1909; *b.* 22 Nov. 1868; *m.* Frances Maud, *d.* of late Chas. Chapman, joined Indian service, 1890; Dy. Supdt., Geological Survey, 1894; Director of Geological Survey, India, 1903-1909; Chairman of Trustees, Indian Museum, 1905-9; President, Burma Oil Reserves Committee, 1908; Fellow and Reader of Calcutta University; Dean of Faculty of Science, 1909; President of Board of Studies in Geology and Mineralogy, 1905-09; President of Manch. Geol. and Min. Socy., 1912-14; President, Indian Mining and Geological Club, and of Royal College of Science Old Students' Association, 1910; Member of Royal Commission on Oil Fuel and Engines, 1911-13; Member of Advisory Committee, Imperial Institute; Bigsby Medallist, Geological Society of London, 1913; President, Geological Section, British Association, 1914.

- Publications*: numerous memoirs on Petrology, Geology, and Anthropology. *Address*: Simla.
- HOLLOWAY, BRIG.-GEN. BENJAMIN, C.I.E.**; Indian Army; *b.* 1861; Entered Indian Army, 1883; Col., 1912; D.A.Q.M.G., India, 1900; Asst. Sec., Military Dept., Govt. of India, 1901-06; Commandant, 29th Lancers, 1909; Dy. Sec., Army Dept., Govt. of India, 1912; Secretary, 1914; G.O.C., Southern Brigade, 1916; served Burma, 1885-86. *Address*: Wellington, Nilgiris.
- HOLME, ALAN THOMAS, I.C.S.**; Resident in Mewar, Rajputana; *b.* 1872. *Educ.*: International School, Naples; Bedford Grammar School; Clifton College; Trinity College, Cambridge. Served in U. P. as Magistrate, Settlement Officer, and acting Private Sec. to the Lt.-Gov. and in Rajputana as Settlement Officer, Political Agent of Southern States, and Resident at Udaipur (Mewar), and Commissioner at Ajmer-Merwara. *Address*: Udaipur, Rajputana.
- HOOPER, REV. WILLIAM, D.D.**; Missionary C.M.S.; Translator, Mossoorie, since 1892; *b.* 1837. *Educ.*: Cheltenham Preparatory School; Bath Grammar School; Wadham College, Oxford; Hebrew Exhibition; Sanskrit Scholarship; 1st class in Lit. Hum.; B.A., 1859; M.A., 1861. Went to India, C.M.S., 1861; Canon of Lucknow, 1906; Vicar of Mount Albert, New Zealand, 1889-90. *Address*: Mussoorie, India.
- HORNELL, WILLIAM WOODWARD, C.I.E.** (1917); Director of Public Instruction, Bengal, since 1913. *b.* 18 September 1878. *Educ.*: Radley and Trinity College, Oxford. Appointed to Indian Education Service, 1902; Board of Education (London), 1908; Assist. Director of Special Inquiries and Reports, 1911; Secretary to the first Imperial Educ. Dept., 1911; D. P. I., Bengal, 1913; Member of Calcutta University Commission, 1917-19. *Address*: Bengal Club, Calcutta.
- HOWARD, ALBERT, C.I.E., M.A., A.R.C.S. F.L.S.**; Imperial Economic Botanist to Govt. of India, since 1905; *b.* 1873; *Educ.*: Royal College of Science, London; St. John's College, Cambridge. First Class Hons. Nat. Science Tripos, 1898; B.A., 1899; M.A., 1902; Mycologist and Agricultural Lecturer, Impl. Dept. of Agriculture for West Indies, 1899-1902; Botanist to South-Eastern Agricultural College, Wye, 1903-1905. Numerous papers on botanical and agricultural subjects. *Address*: Pusa, Bihar.
- HOWARD, HENRY FRASER, C.S.I.** (1919); C.I.E. Sec., Govt. of India, Fin. Dept., since 1917; *b.* 1874. *Educ.*: Aldenham School; Trinity Hall, Cambridge. Classical Tripos, 1895, Class I, Division 1; I.C.S., 1896; Supt., Revision of Impl. Gazetteer for Bengal, 1904; Und.-Secy. to Govt. of India, Fin. Dept., 1905; Collector of Customs, Calcutta, 1909-13; Controller of Currency, India, 1914-16; Officiating Sec. to Govt. of India, Commerce and Industry Dept., 1916. *Address*: Delhi and Simla.
- HOWELLS, GEORGE, B.A. (Lond.)**; M.A. (Camb.); B. Litt. (Oxon); B.D. (St. Andrews); Ph.D. (Tubingen) Principal of Serampore College, Bengal, since 1906; *b.* May 1871. *Educ.*: Gelligaer Grammar School; Regent's Park and University Colleges, London; Mansfield and Jesus Colleges, Oxford; Christ's College, Cambridge; Univ. of Tubingen. Appointed by Baptist Missionary Society for Educational work in India, 1895; located at Cuttack, Orissa, engaged in High School and theological teaching, and general literary and Biblical translation work, 1895-1904; originated movement for reorganisation of Serampore College. Angus Lecturer, 1909; and Fellow of University of Calcutta, 1913. *Address*: Serampore College, Serampore, Bengal.
- HUDDLESTON, CAPTAIN ERNEST WHITESIDE, C.I.E.**; J.P.; R. Ind. Mar.; Sen. Mar. Transport Officer, Bombay, 1914-18. *b.* Aug 1874; *Educ.*: Bedford School. Entered R. I. M., 1895; served Egyptian Camp. 1895-96; wrecked in Warren Hastings' troopship off Reunion, 1897; received Roy. Humane Society's silver medal, and Lloyd's silver medal for saving life on this occasion; Lieut., 1900; served China Expedition (Boxer Rising), 1901-02. as Assist. Mar. Transport Officer; Mar. Transport Officer, Somaliland Expedition, and was in charge of landing operations in Obbiat, 1902-4; Staff Officer, Bombay Dockyard, 1911; Commander, 1913. Captain, 1917. *Address*: R. I. M. Dockyard, Bombay.
- HUDSON, LT.-GEN. SIR HAVELOCK, K.C.B.** (1918), C.I.E. (1903). Adjutant-General in India since February 1917. *b.* 26 June, 1862. *m.* Kate, daughter of late Major Hawkins. *Educ.*: Reading School. 2nd Battalion Northants Regiment; 1881-84, 19th Lancers (I. A.), 1885-1910. Served in N. W. F. Campaigns, 1889 and 1897; China, 1910; European War, 1914-17. Mentioned in despatches five times. Commanded 8th Division in France. *Address*: Simla.
- HULL, REV. ERNEST R., S. J.**, EDITOR OF *The Examiner*. *b.* 9 September 1863. *Educ.*: Society of Jesus, English Province. Came to India 1902 and since then engaged in literary work in Bombay. *Publications*: *The Examiner* and a series of Examiner Reprints, on theological, historical and controversial subjects. *Address*: *The Examiner* Press, Medows Street, Bombay.
- HUNTER, MATTHEW, C.I.E.**; Principal, Rangoon College, since 1911. *Educ.*: Giggleswick School; Queen's College, Oxford; Strassburg and Heidelberg Universities; Honours Final School of Natural Science, Oxford; Burdett-Courts University Scholarship in Geology; M.A., 1890. Lecturer in Chemistry and Physics, Rangoon College, 1890-1909; Chemical Examiner to Govt. of Burma, 1890-1905; Acting Principal, Rangoon College, 1905 and 1909-11. *Address*: Rangoon College, Rangoon.
- HUSSAIN, MOULVI AHMED, C.S.I.**, Nawab Ameen Jung Bahadur, Assistant Minister to H. H. Nizam, since 1914, and Ch. Sec. to Nizam's Govt., since 1896. *Educ.*: Christian College, Presidency College, Madras Univ. M.A., 1890; Dy. Coll. and Mag., Madras Presidency, 1890-92; Assist. Priv. Sec. to H. H. Nizam, 1893; F.S.A., 1902; F.R.A.S., 1914.

HYDERABAD, HIS EXALTED HIGHNESS ASAF JAH MUZAFFAR-UL-MAMALIK NIZAM-UL-MULK NIZAM-UD-DAULA NAWAB MIR (SIR) OSMAN ALI KHAN BAHADUR FATEH JANG OF, G. C. S. I., (1911), SON OF THE LATE LIEUT.-GENL. MIR SIR MAHMOOD ALI KHAN BAHADUR, G. C. B.; G. C. S. I., NIZAM OF HYDERABAD; b. 1886; ed. privately; Hon. Col. in the Army, and of 20th Deccan Horse. Address: Hyderabad, Deccan.

IDAR, MAHARAJA OF, since July 1911, MAHARAJA DHIRAJ MAHARAJI SHRI DOLAT SINGHI; m. Maharani Shri Poonglianji. Heir: s. Maharaja Kumar Himmatsinghi. Address: Himmatnagar (Mahikantha Agency).

IFTIKHAR-UD-DIN, C.I.E., Fakir Sayad; Settlement Collector, Punjab, since 1910; joined service, 1886; Revenue Member of Council of Tonk State, 1906; Special duty with Amir of Afghanistan, 1906; British Agent at Cabul, 1907. Address: Lahore.

IMAM, SYED HASAN, Barrister. b. 31 August 1871. Educ.: Patna and in England. Called to the Bar (Inner Temple), 1892. Practised at Patna and Calcutta until 1911. Judge of the High Court, Calcutta, 1912-16. Resumed practice at Patna. President, special Session, Indian National Congress, September, 1918. President, All-India Home Rule League. Address: Hasan Munzil, Patna.

IMPEY, LT.-COL. LAWRENCE, C.S.I., C.I.E.; Resident at Baroda; b. 1862. Educ.: Marlborough; Sandhurst, Indian Army, 1885; employed under Govt. of India in the Pol. Dept., 1887; has held appointments of Pol. Agent in Alwar, Bhopal, Eastern States, Rajputana, Bundelkhand, etc. Address: Baroda.

INDORE, MAHARAJA OF, H. H. MAHARAJA-DHIRAJA TUKOJI RAO HOLKAR, BAHADUR; b. 1891. Educ.: Mayo Chiefs Coll., Ajmere; Imp. Cadet Corps. Address: Indore.

IRWIN, HENRY, C.I.E., M.I.C.E.; b. 1841; joined P.W. Dept., 1868; Consulting Architect to Govt., 1889 retired, 1896. Address: Adyar House, Adyar.

ISACKE, BT.-COL. (TEMP. BR. GEN.) Hubert, C.M.G. (1915), Director, Military Training, A. H. Q., India, b. 28 October 1872. m. Ada Mildred, daughter of the late Sir Charles Layard. Educ.: King's School, Canterbury; R. M. C. Sandhurst. R. West Kent Regiment, 1892. Served in France, 1915-16. Address: Army Head Quarters, Simla.

ISRAR, HASAN KHAN, KHAN BAHADUR, C.I.E.; Jud. Minister, Bhopal; b. Shahjahanpur. Educ.: Shahjahanpur, Bareilly. Address: Judicial Minister, Bhopal.

IYENGAR, S. SRINI VASA, Advocate-General, Madras. b. 11 September 1874. Educ.: Madura and Presidency College, Madras. Vakil (1898). Member of Madras Senate, 1912-16, President, Vakils' Association of Madras; President, Madras Social Reform Association; Member of All-India Congress Com. Publication: a book on law reform (1909). Address: Mylapore, Madras.

IZZAT NISHAN, KHUDA BAKHASH KHAN TIWANA. Nawab, Malik; Dist. Judge, Dera

Ghazi Khan; b. 1866. Educ.: Govern High School, Shahpore; private training through Col. Corbyn, Deputy-Commissioner, Appointed an Hon. Magistrate, 1881; Extra Asst. Commsr., 1894; British Agent in Cabul, 1903-06. Address: Khawajabad, district Shahpore, Punjab.

JACKSON, JOHN ERNEST, A.C.A., C.I.E.; Chief Auditor, B. B. & C. I. Railway, Bombay. b. 26 November 1876; Educ.: Marlborough College. Address: Malabar Hill, Bombay.

JACOB, ARTHUR LESLIE, C.I.E.; Major I. A.; Pol. Ag., Zhob, since 1912; in military employment, 1891-98; Pol. Asst., Zhob, 1898; Asst. to Gov.-General's Agents, Baluchistan, 1901; Pol. Ag., Baluchistan, 1909. Address: Zhob, Baluchistan.

JAIPUR, MAHARAJA OF, MAJ.-GEN. H. H. SARANAD-I-RAJHAI-HINDUSTAN RAJ RAJEN DRA SHREE MAHARAJADHIRAJ, SIR SAWAI MADHO SINGH BAHADUR, K.G.C.S.I., G.C.I.E., G.C.V.O. Donat of the Order of the Hospital of St. John of Jerusalem, LL.D., Edin. Hon. Major-General; Hon. Col. of 13th Rajputs (Shekhawat) Regiment; Member of First Class of Order of Crown of Prussia, 1910; b. 1861; s. 1880. Address: Jaipur.

JAMES, LT.-COL. CHARLES HENRY, C.I.E., I.M.S.; Civil Surgeon, Delhi: b. 1863. Educ.: Cranleigh; St. Thomas' Hospital, London; M.R.C.S. and L.R.C.P.; Asst. House Surgeon; House Surgeon and Resident Accoucheur, St. Thomas' Hospital, 1888-89; House Physician, Gen. Lying-in Hospital, 1889-90; entered I. M. S., 1891; Dy. Sanitary Commsr., Punjab, 1894-1900; Medical Adviser, Patiala State, 1903-12; F.R.C.S., England, 1908; Major, 1903; Lieut.-Colonel, 1911; Civil Surgeon, Simla, 1912-16. Publications: Manual for Vaccinators in the Punjab, 1895; Report of Plague in Bombay, 1897; Report of Outbreak of Plague in Punjab, 1897; articles on Medical and Surgical subjects in medical journals. Address: Delhi.

JAMES, MAJ.-GEN. WILLIAM BERNARD, C.B. (1918); C.I.E. (1912); M.V.O. (1911). G.O.C. Bombay Brigade, since November 1919. b. 8 February 1865. m. Elizabeth Minto. Educ.: Westward Ho. and Sandhurst; 2nd Battalion, Sherwood Foresters, 1886; 2nd Bengal Cavalry, 1888, Special duty War Office, 1900-01. Served in S. African war and in European war. Temporary Q. M. G. in India, July 1916—February 1917. Major-General in charge of administration, S. Command, 1917-19. Address: Queen's Road, Bombay.

JAMIAT RAI, DIWAN, RAI BAHADUR, C.I.E. b. 1861. Educ.: Bhowan, Kohat and Gujrat. Ent. Govt. service, 1880; served in Political Office with Kuram F. F. 1880; accompanied Afghan Boundary Commission, 1885-86; special duty, boundary settlement of Laghari Barkhan, 1897; Asst. to the Supdt. of Gazetteers of Baluchistan, 1902-07; services acknowledged by Govt. of India; Asst. to Supdt. of Census Operations, Baluchistan, 1910-11; Ex. Asst. Commsr., 1902; Settlement Officer, Baluchistan, 1912. Address: Quetta.

JANJIRA, H. H. NAWAB SIR SIDI AHMAD KHAN SIDI IBRAHIM KHAN, G.C.I.E.; b. 1862; *s.* 1879; descendant of Sarul Khan family. *Heir: s.* Sidi Mahamad Khan, *b.* 7 Mar. 1914. *Address:* Janjira, Kolaba.

JAORA STATE, MAJOR H. H. FAKHAR-UD-AULAH NAWAB MUHAMMED IFTAKAR ALI KHAN BAHADUR SAULAT, K.C.I.E. b. 1884. H. H. served in European War. *Address:* Jaora State, Central India.

JARDINE, WILLIAM ELLIS, C.I.E., F.R.G.S., M.R.A.S.; b. 1867. *Educ.:* Fettes College, Edinburgh; Wren's; Trinity College, Cambridge. *Ent.* I.C.S., 1886; joined Pol. Dept. of Govt. of India, 1893; became 2nd Asst. Resident, Hyderabad, 1st Asst., Ag. to Govr.-Gen. in Cent. Ind. and 1st Asst. Resident, Hyderabad; Pol. Ag., Bundelkhand, 1904-09; Malwa, 1910-11; Resident, Gwalior, 1912-13; Baroda, 1914; Gwalior, 1914-1917; Knight of Grace of Order of St. John of Jerusalem. Royal Automobile; Royal and Ancient Golf, St. Andrews. *Address:* Royal Yacht, Bombay.

JEHANGIR, SIR COWASJEE, 1st Baronet; nephew and adopted son of late Sir Cowasjee Jehangir Readymoney, C.S.I., *b.* 5th June 1853; *Educ.:* Proprietary School; Elphinstone College and University of Bombay; merchant, millowner and landed proprietor; Delegate of the Parsee Matrimonial Court; has assumed the name of Cowasjee Jehangir, Kt., 1895; *m.* 1876, Dhunbai, *d.* of the late Ardesher Hormusjee Wadia, and has issue. *Address:* Readymoney House, Malabar Hill, Bombay.

JEHANGIR, COWASJI (Junior), M.A. (Cambridge), O.B.E. (1918). Partner in the firm of Cowasji Jehangir & Co., *b.* February 1879; *m.* to Hirabai, *d.* of H. A. Hormasji of Lowjee Castle. Educated at St. Xavier's College, Bombay, and St. John's College, Cambridge. Member of the Bombay Corporation since 1894; Chairman of its Standing Committee, 1914-1915; Member of the Bombay Improvement Trust. *Address:* Nepean Sea Road, Malabar Hill, Bombay.

JEJEEBHoy, SIR JAMSETJEE, 5th Baronet; *b.* 6th March 1878; *s.* father Sir Jamsetjee, 1908, and assumed the name of Jamsetjee Jejeebhoy in lieu of Rustomjee; Head of the Zoroastrian Community in Bombay; Pres. of the Sir Jamsetjee Charity Funds, M.L.C., Bombay, and Member of Municipal Corporation *m.* 1906, Serenebai Jalbhoy Ardesar Sett. *Address:* Mazagon Castle, Bombay.

JENNINGS, COL. HERBERT ALEXANDER KAYE, C.I.E.; R.A.; Director of Ordnance Stores in India; *b.* 1862; *s.* of Maj.-Gen. C. J. Jennings; *Educ.:* Wellington College. Entered R. A. 1882; Lt.-Col. 1910; Col. 1914. *Address:* Simla.

JENNINGS, JAMES GEORGE, C.I.E. (1919), Vice-Chancellor, Patna University, since 1917. *b.* 14 June, 1866. *m.* Maud *d.* of G. G. Davis. *Educ.:* Ashby-de-la-Zouch Gr. Sch. and Lincoln College, Oxford. Appointed to I.E.S., 1892. Princ., Muir Central College, 1907; Director, Public Instruction, Bihar and Orissa, 1913. Member,

Legislative Council, Bihar and Orissa, 1913-16, 1917. Additional Member (Temp.), Viceroy's Legislative Council, 1917. *Publications:* Addresses to Students. Essay on Metaphor. Select Passages on duty to the State. Selections from Marcus Aurelius, Sakuntala, adapted from Kalidasa. From an Indian College. *Address:* Patna, Bihar.

JENNINGS, THE HON. MAJ.-GEN. WILLIAM ERNEST, Kt. of Grace, Order of St. John of Jerusalem (1914); M.D.; C.M. D.P.H.; Surgeon General with the Government of Bombay. *b.* 1 January 1865. *m.* Margaret Catherine Steele. *Educ.:* Edinburgh University. Joined I.M.S., 1887. *Publications:* Manual of Plague. Transactions of Bombay Medical Congress. War Relief Work in the Bombay Presidency. Associate-Editor, *The Indian Medical Gazette.* *Address:* 5 Queen's Gardens, Poona.

JESSE, WILLIAM, M.A.; Principal, Meerut Coll., since 1903; *b.* 7 Sep. 1870. *Educ.:* Hereford Cath. Sch.; Selwyn Coll., Cambridge. Asst. Master, Bedford Mod. Sch., 1891-94; La Martiniere Coll., Lucknow, 1894-1903; Fellow and Syndic, Allahabad Univ.; Fellow, Zoological Soc. and Mem., Brit. Ornithological Union. *Publications:* Various pamphlets and papers on Indian ornithology and on Indian education. *Address:* The College, Meerut.

JEVONS, HERBERT STANLEY, M.A., B.Sc. (Lond.), F.G.S., F.S.S.; Univ. Prof. of Economics in Univ. of Allahabad since 1914, editor of Indian Journal of Economics; *b.* 8 Oct. 1875. *Educ.:* Giggleswick Gram. Sch. Univ. Coll., London; Trin. Coll., Cambridge; Geol. Inst., Heidelberg Univ. Demonstrator in Itrology, Cambridge, 1900-01; Lecturer in Mineralogy and Geology, and Asst. to Prof. T. W. Edgeworth David, F.R.S., in University of Sydney, N.S.W., 1902-04; Lectr. and later Fulton Prof. of Econ. and Pol. Science in Univ. Coll. of S. Wales and Monmouthshire, Cardiff, 1905-11; engaged on researches in economics of Indian coal trade, irrigation, and other industries, 1915-16. *Publications:* Numerous papers and articles on Petrology, Mineralogy, Economics, Politics Housing Reform, etc. *Address:* The University, Allahabad; Rhubina Garden Village, Cardiff.

JEYPORE, MAHARAJA SRI SIR VIKRAMA DEO OF, K.C.I.E.; *b.* 6 Dec. 1874; *o. s.* of late Maharajah Sri Sri Sri Ramachandra Deo and Maharani Sri Sri Sri Lakshmi Pattamah Devi; *m.* 1893, Lady Maharani Sri Sita Patta Maha Devi, *d.* of late Rajah Sri Dharmajit Sing Deo Bahadur, Feudatory Chief, Udaipur. C. P.; one *s.* one *d.* *Educ.:* privately. *Address:* Fort, Jeypore, Vizagapatam District, Madras.

JHALAWAR, H. H. MAHARAJ RANA SIR BHAWANI SINGH BAHADUR OF, K.C.S.I.; *b.* 1874; *s.* 1899. *Educ.:* Mayo Coll., Ajmere. *Address:* Jhalrapatan, Rajputana.

JIND, H. H. FARZAND-I-DIEBAND RASIKH-UL-ITIKAD DAULAT-I-INGLISHIA, RAJA-I-RAJGAN MAHARAJA SIR RANBIR SINGH BAHADUR; received hereditary title of Maharaja, 1911; G.C.I.E., K.C.S.I.; *b.* 1879; *s.* 1887. *Address:* Sangrur, Jind State, Punjab.

JODHPUR, REGENT OF, LIEUT.-GENL. SIR PERTAB SINGHJI, G.C.V.O., G.C.S.I., K.B.C., LL.D., Hon. A.D.C. to H. M. the King-Emperor; *b.* 1845; *m.* Maharani Bhatiani (d. 1907); Hon. Commandant of Imperial Cadet Corps; received administrative training under H. H. Maharaja Ram Singh of Jaipur; was invited to Jodhpur by his elder brother Maharaja Sir Jaswantsingh and placed at head of Jodhpur administration; he was one of Kabul Mission of 1878, an extra A.D.C. to General Ellis in the Muhmand Expedition in 1897, and to General Sir William Lockhart in Tirah Campaign in 1898 (wounded, and despatched); in 1900 he went with British Force to China in command of Jodhpur Imperial Service Troops and saw active service; was made Ruling Chief of Idar State in Guzerat in 1902, which he abdicated in favour of his son; made Lt.-Col. and subsequently Major-General in British Army; European War, 1914-15 (despatches). On death of Maharaja Sri Sumer Singhji of Jodhpur again appointed Regent. *Address:* Jodhpur, Rajputana.

JOGLEKAR, RAO BAHADUR RAMCHANDRA NARAYAN, I.S.O.; B.A.; Coll. Baroda State, since 1917; Depy. Coll. 1st Gr. and Native Asst. to Commr., C.D., 1901-16; some time Cerv. Adv. to Chief of Ichalkaranji; *b.* Satara 8th Dec. 1858; *Educ.:* Deccan Coll., Poona. Held non-gazetted appointments in Nasik, Satara, Ahmednagar, Poona and Sholapur Distrs., 1883-1899; Depy. Coll., 1899. *Address:* 174, Kala Haud, Shukrawar Peth, Poona City.

JOHN, EDWIN, KT. of the Order of St. Gregory the Great (Civil Order), 1901, C.B.E. (1919). Cotton and seed merchant and mill-owner. *b.* 3 August 1856. *Educ.:* Stonyhurst. *m.* Mary Sykes. *Address:* 49, Cantonments, Agra, U. P.

JOHNSTON, FREDERICK WILLIAM, C.S.I., C.I.E.; I.C.S.; in Pol. Dept. of Govt of India; Depy. Sec. to Govt. of India, Fin. Dept.; *b.* 2nd Nov. 1872; *Educ.:* Kelvinside Acad., Glasgow; Trinity Hall, Cambridge (B. A. 1894). Asst. Commr. 1896; went to N. W. Fron. 1899; and was employed there till end of 1911 in capacities (amongst others) of Pol. Agent, Wana and of Kurram, and as Sec. to Chief Commr. accompanied Mahsud Exp. of 1902-03 as Pol. Off. *Address:* Simla.

JOSHI, REV. CANON, D. L., Canon of St. Thomas' Cathedral, Bombay; Hon. Chap. to Bishop of Bombay; Marathi Priest-in-charge, Emmanuel Church, Bombay; *b.* 8 May 1864; *Educ.:* Robert Money Sch., Bombay; Coll. of Science, Poona; Div. School, Poona. Left Civil Engineering for Theology, 1882; after being schoolmaster, ordained, 1893; for sixteen years in charge of the C.M.S. Marathi Church in Bombay. *Address:* Molesworth, Girgaum, Bombay.

JUGMOHANDAS VARJIVANDAS, SIR, KT., J.P., Merchant and Landlord; *b.* 1869; *Educ.:* Fort High Sch., Bombay. Mem., Bombay Corp., 1900-06; trustee of several charitable institutions. *Address:* Bombay.

KAJIJI, MR. JUSTICE ABDEALI MAHOMEDALI, B.A., LL.B. (Cantab.), Bar-at-Law; Judge, High Court, Bombay. *b.* 12 February, 1871. *Educ.:* St. Mary's Institution, Byeulla; St. Xavier's Coll., Bombay, Downing Coll., Cambridge and Lincoln's Inn. Ord. Fellow, Syndic and Dean in Law of Bombay Univ. *Address:* Dilkhoosh, Grant Road, Bombay.

KANDATHIL, RIGHT REV. DR. AUGUSTINE; Titular Bishop of Arad, and Coadjutor with right of succession to Vicar-Apostolic of Ernakulam, since 1911; *b.* Chemp, Vaikam, Travancore, 10 Sep. 1874. *Educ.:* Papal Seminary, Kandy, Ceylon. Priest, 1901; Parish Priest for some time; Rector of Prep. Sem., Ernakulam, and Sec. to Vicar Apostolic of Ernakulam to end of 1911. *Address:* Ernakulam, Malabar.

KANIKA, THE RAJA OF, HON. RAJA RAJENDRA NARAYAN BHANJA DEO OF KANIKA; Mem., Imp. Leg. Council of India, since 1916; *b.* 24 March 1881. *Educ.:* Ravenshaw Coll. Sch.; Coll., Cuttack. Received management of Killah Kanika from Court of Wards, 1902; Mem. of the Bengal Leg. Council, 1909-12; Mem. of Bihar and Orissa Leg. Council, 1912-16; Pres., Orissa Land-holders' Assn.; Vice-Pres., Bengal Land-holders' Association; Mem. of Bengal Fishery Board; Vice-Pres., Bihar Landholders' Association; Mem., Roy. Asiatic Soc., etc. *Address:* Cuttack, Orissa.

KANTARAJ URS, SIRDAR M., C.S.I.; Mem. of Exec. Council, Mysore, since 1913, and First Mem., since 1916; *b.* 20th Sep. 1870. *Educ.:* Maharaja's Coll., Mysore; The Christian Coll., Madras; Asst. Commr., 1894; Asst. Priv. Sec. to H. H. Maharani Regent, 1895-99; Special Asst. Commr., Bangalore, 1899; Depy. Commr., Mysore Dist., also Pres., Mysore City Mun. Council, 1902; Chairman, Mysore City Imp. Trust Board, 1908; Exec. Commr. in Mysore, 1912; Chairman, Industries and Commerce Committee, 1912-16; Mem. of Exec. Council, Mysore, 1913; created Raja Seva Dhurina (Gandabherunda Order), Oct. 1916. Appointed Dewan, 14th July 1919. *Address:* Beaulieu, Avenue Road, Bangalore.

KAPURTHALA, H. H. JAGATJIT SINGH BAHADUR, MAHARAJA RAJA-I-RAJGAN OF, G.C.S.I., K.C.S.I.; *b.* Sept. 1872; *s.* father, 1877. *Address:* Kapurthala, Punjab.

KARAULI, H. H. MAHARAJA DHIRAJ SIR BHANWAR PAL, DEO BAHADUR, YADUKUR CHANDRA BHAI, G.C.I.E., K.C.I.E., *b.* 24 July 1864. *Educ.:* Mayo Coll., Ajmere. *s.* 1886. *Address:* Karauli, Rajputana.

KAYE, LT. COL., C. S. I., C. I. E., I. A., Ag. Dir. of Central Intelligence, 1919. *b.* 27 May 1868; *Educ.:* Winchester. Joined 2nd Bn. Derbyshire Regt., 1889; transferred to I. A., 1892; served N. W. F. of India, 1897-98; Gen. Staff Offr. at I. A. Hd-quarters, Simla, 1908; Chief Postal Censor, 1914-19. *Address:* Simla.

KEATINGE, GERALD FRANCIS, C.I.E., Dir. of Agriculture, Bombay Pres. *b.* March 1872. *Educ.:* Sherborne Sch., Balliol Coll., Oxford. Ent. I. C. S., 1894; Dir. of Agriculture, 1907;

- Mem. of Leg. Coun., Bombay, 1916. *Address*: Poona.
- KEELING, HUGH TROWBRIDGE, C.S.I., A.M.I.C.E.,** Ch. Eng. and Sec. to Ch. Commsr., Delhi, since 1912; Mem. of Delhi Imp. Commn., 1913. *Educ.*: R.I.E., Coll. Asst. Eng., Madras P. W. D., 1887; Exec. Eng., 1898. *Address*: P. W. D., Delhi.
- KEEN, MAJ. WILLIAM JOHN, C.I.E.,** Pol. Dept., Govt. of India. *Educ.*: Haileybury Coll.; R.M.C., Sandhurst. *Gaz.* to R. Welsh Fus., 1892; *Trans.* to I. A. 37th Dogras, 1894; served Chitral Re. Exp., 1895; Joined Punjab Commn. 1898; Pol. Dept., Govt. of India, 1901; serving in N. W. Fron. Prov.; served Kabul Khel Exp., 1902; Mohmand Exp., 1908. *Address*: Pol. Agent, Dir Swat and Chitral Malakand, N.W.F.P.
- KEITH, WILLIAM JOHN, C.I.E., M.A.,** Rev. Sec., Burma, since 1912; Mem. of Coun. of Lt.-Gov. b. 1873; *Educ.*: Edinburgh H. Sch. and Univ.; Christ Church, Oxford. Ent. I.C.S., 1895; (first in final Exam. 1906). Sec. to Fin. Commsr., 1899-1905; Sett. Off., 1907-10; Sec. to Govt. of Burma, 1911-12. *Address*: Brahead, Rangoon; Canmaresk Maymyo.
- KEMP, NORMAN WRIGHT, Bar-at-Law** (Inner Temple); Addl. Jud. Comsr., Sind, b. 29 October 1874. *Educ.*: the Collegiate, Edinburgh and Inner Temple. Chief Presidency Magistrate, Bombay, Chief Judge of Small Causes Court, Bombay; Acting Judge, High Court, Bombay. *Address*: Yacht Club, Bombay; Sind Club Karachi.
- KENDALL, COMMANDER CHARLES JAMES COPE, D.S.O.,** R. I. M., b. 1864; *Educ.*: Epsom. Ent. R.I.M. 1885; served Burma, 1885-89; Marine Survey, India, 1889-97; China, 1900, Somaliland, 1904. *Address*: Port Office, Calcutta.
- KERR, JOHN HENRY, C.S.I., C.I.E., I. C. S.,** Ch. Sec. to Govt. of Bengal, since 1915; b. 1871. *Educ.*: Glasgow Academy and Univ.; Clare Coll., Cambridge. Joined I. C. S., 1892; Settlement Officer, Bihar, 1899; Coll. of Midnapore, 1904; Dir. of Land Rec., Bengal, 1905; Depy. Sec. to Govt. of India, 1907; Rev. Sec. to Govt. of Bengal, 1911. *Publications*: Settlement reports of Saran and Darbhanga; joint-editor of Rampini's Bengal Tenancy Act. *Address*: Government of Bengal, Calcutta.
- KETTLEWELL, ARTHUR BRADLEY, C.I.E., I.C.S.,** late Add. Sec. to Govt., Punjab, *Educ.*: Cheltenham; New Coll., Oxford. Ent. I.C.S., 1890; Pol. Off., Wano, 1898-99. Depy. Commsr., 1903; Sec. to Govt., Punjab, 1903-07. *Address*: Lahore.
- KHAIRPUR STATE, H. H. MIR IMAM BAKSH KHAN, RULER OF, G.C.I.E.,** *Address*: Khirpur State, Bombay Presidency.
- KIDD, RALPH,** Manager, National Bank of India, Ltd., Bombay; b. 14 March 1872. *Educ.*: High School, Dundee, Scotland. Entered Union Bank of Scotland, Ltd., Dundee in 1886, afterwards transferred to Glasgow. Joined National Bank of India, Ltd., in 1891, and their Calcutta Office in 1896.
- KILBY, REGINALD GEORGE, C.I.E., I.C.S.,** Mag. and Coll., Balasore, Bihar and Orissa; since 1912. *Educ.*: Winchester; Pembroke Coll., Oxford. Ent. I.C.S., 1895; Mag. and Coll., 1910. *Address*: Balasore, Orissa.
- KINCAID, CHARLES AUGUSTUS, C.V.O.,** b. 8 Feb. 1870; *Educ.*: Sherborne Sch., Balliol Coll., Oxford. Passed I.C.S. examination, 1889; came out to India, 1891; Pol. Sec., 1910; Agent for Sardars in Deccan, 1914; Dist. and Sess. Judge, Satara, 1913-18; Addl. Judl. Commsr., Sind, 1918; *Publications*: Outlaws of Kathiawar, and The Tale of a Tulsi Plant (Essays on Indian Subjects); Deccan Nursery Tales, 1914; The Indian Heroes, 1915; Ishtur Phakde, 1917. *Address*: Karachi.
- KING, CHARLES MONTAGUE, C.I.E.,** Depy. Commsr., Punjab, since 1901. *Educ.*: St. Paul's School; Balliol Coll., Oxford. Ent. I.C.S., 1890. Depy. Commsr., 1901. *Address*: Amritsar.
- KIRKPATRICK, TEMPLE LIEUT.-GEN. SIR GEORGE MACAULAY, K.C.S.I., C.B.,** Ch. of General Staff, Army Headquarters, India, since 1916; b. 23 Aug. 1866; s. of late Sir George Airey Kirkpatrick, K.C.M.G., ex-Lieut.-Governor of Ontario; m. 1896, Mary Lydia, 3rd d. of late J. F. Dennistoun; *Educ.*: Trinity Coll. School, Port Hope, Canada. Haileybury; R. M. C., Kingston, Canada. Ent. R.E. 1885; Capt., 1894; Major, 1903; Col., 1906; A.D.C. to G.O.C., Thames District, 1892-95; D.A.A.G., S. Africa, 1899-1902, D.A.Q.M.G., Canada, 1902-04; Headquarters, 1904-06; G. S. O., 1st Gr., India, 1906-10; served S. Africa, 1899-1902; Eur. War, 1914-15 (from Maj.-Gen.); passed Staff Coll.; Insp.-Gen., Force of Australia, 1910-14, Dir., Mil. Operations, India, 1914-16. *Address*: Army Headquarters, Simla.
- KISHENGARH, H. H. MAHARAJA ADHIRAJ MAHARAJA MADANSINGH BAHADUR, K.C.S.I., K.C.I.E.,** b. Nov. 1884; s. father, late Maharaja Sir Sardul Singh Bahadur, G.C.I.E.; cr. 1892; m. 2nd d. of present chief of Udaipur; served European War, 1914-15. *Address*: Kishengarh, Rajputana.
- KISHEN PERSHAD, RAJAYAN-I-RAJAH MAHARAJAH BAHADUR, YAMINUS-SULTANAT, SIR, G.C.I.E., K.C.I.E.,** Prime Min. of State of Hyderabad, 1901-12; b. 28 Jan. 1864; m. four s. *Educ.*: Nizam Coll., Hyderabad. Min. of Mil. Dept., 1893-1901. *Decorated* for services rendered to the Hyderabad State. *Address*: City Palace, Hyderabad Deccan.
- KITCHEN, ARTHUR JAMES WARBURTON, C.I.E., I.C.S.,** Depy. Commsr., Lyallpur, Punjab, since 1904; b. 31 Jan. 1870; *Educ.*: Chifton Coll.; Pembroke Coll., Cambridge (B.A.). Ent. I.C.S., 1893. *Address*: Lyallpur Punjab.
- KITSON, MAJOR-GENERAL SIR GERALD CHARLES, K.C.V.O., C.B.C.M.G., C.V.O.,** Command. 2nd Div. India since 1912; b. 6 Oct. 1856. *Educ.*: Winchester. Ent. Army, 1875; Lieut.-Col. 1896; D.A.A.G., Meerut, 1890-1892; A.A.G. Umballa, 1892-94; served Manipur, 1891; Staff Coll. 1885-86; late Commndt. of R. M. C., Kingston, Canada. Mil. Att. Brit.

- Emb. Washington; Commdt. of R. M. C., Sandhurst, 1902-07; Commdg. Brig., Jubbulpore, 1907; Jubbulpore, 1908; Q.M.G., India 1909-12: *Address*: Rawal Pindi.
- KNAPP, ARTHUR ROWLAND, C.B.E.** (1919). Secretary, Revenue Department, Madras. *b.* 10 December 1870. *Educ.*: Westminster School, Christ Church, Oxford. *m.* Florence Annie, *d.* of the late Dr. E. Moore, Princ. of St. Edmund's Hall, Oxford, and Canon of Canterbury. Was in charge of the Madras Camps at Delhi Durbars of 1903 and 1911. *Address*: Madras.
- KNIGHT, MAJ.-GEN. SIR WYNNDHAM CHARLES, K.C.I.E.** (1919), C.S.I., C.B., D.S.O.; Major-General in charge of administration, S. Command, since November, 1919. *b.* 30 November 1863; *Educ.*: Cheltenham. Served N.-W. F., 1897; Mohmand Exp. as Road Commdt.; Tirah, 1897-98. S. African War, 1900-03; Ch. staff officer, Imp. Yeomanry, G.O.C. Bombay Brigade, 1915-19. *Address*: Poona.
- KNOWLES, LT.-COL. JOHN GEORGE, C.I.E., V.D.**; Commdt., Surma Valley L. H.; Hon. A.D.C. to Viceroy and Govr.-Gen., Cachar; tea planter. *Address*: Surma Valley, Cachar, Assam.
- KNOX, LT.-COL. STUART GEORGE, C.I.E.**; Sen. Jud. Offl., Ind. Exp. Fee.; *b.* 7 Oct. 1869. *s.* of Sir George Edward Knox; *m.* 1893 Ethel Laura, *e. surv. d.* of Rt. Hon. Sir John Edge; two *s.* *Educ.*: Elizabeth Coll. Guernsey; Repton Sch.; R.M.C., Sandhurst. Ent. Army, 1888; Capt. I. A., 1899; Major, 1906; served operations in Mekran, 1898 (despatches). *Address*: Basra, Mesopotamia.
- KOLHAPUR, H. H. SIR SHAHU CHHATRAPATI, MAHARAJA OF, G.C.I.E., G.C.S.I., G.C.V.O., LL.D.** (Camb); Hon. Col. in Brit. Army; Hon. Col. 103rd Mahatta L. I.; *b.* 26th June 1874; adopted on 17th March 1884, from Kagal Chief's family, being natural born son of Jayasingrao Ghatge Sarjarao Vazarat Ma-ab Chief of Kagal; *m.* Lakshmi-bai Saheb *g.d.* of sister of H.H. late Ganapatrao Gaikwad, Maharaja of Baroda; two *s.* one *d.* *Educ.*: privately under a European tutor and guardian, Mr. S. M. Fraser; Rajkumar Coll. Rajkote. Has been administering affairs of Kolhapur State from 2nd April 1894. Decorated for loyalty, good government and in recognition of dignity of house. Has salute of 21 guns. *Address*: Kolhapur.
- KOTAH, H. H. MAJOR SIR UMED SINGH BAHADUR, MAHARAO OF, G.C.S.I., G.C.I.E., K.C.S.I.**; Hon. Lt.-Col. in Army; Hon. Major, 42nd Deoli Regt.; *b.* 1873; *s.* 1889. *Address*: Kotah Rajputana.
- KOTLA, HON. RAJA KUSHALPALSINGH OF, M.A. (Cal.), LL.B. (All.), LL.D., Ph.D., M.R.A.S., F.R.S.L., F.R.G.S., F.R. His. S., M. R. Num. S., F.R.S.A., M.B.A.S., etc.**; *b.* 15 Dec. 1872; *s.* to Kotla estate, 1905. Mem. of U. P. Leg. Coun. since 1909. Mem. of Imp. Leg. Coun. as Rep. of landed aristocracy of Prov. of Agra, 1913; Sp. Mag., Vice-Chairman of Agra Dist. Bd.; Chairman of Firozabad Mun.; trustee and Mem. of Managing Comm. of Agra Coll. *Address*: Kotla Fort, P.O. Kotla, Dist. Agra, U.P.
- KRISHNAN CHERUVARI, Ch. Judge, Presy. S. C. Court, Madras.** *b.* 26 November 1868. *Educ.*: High School, Cannanore; Government College, Calicut; Presidency College, Madras; Christ's College, Cambridge. Joined Madras Bar, 1891. Fellow, University of Madras. *Address*: Shenstone Park, Harrington Road, Madras.
- KUTCH, H. H. MAHARAJA DHIRAJ MIRZAN MAHARAO SHRI KHENGARJI SAWAI BAHADUR OF, G.C.S.I., G.C.I.E.**; *b.* 16 Aug. 1867; *s.* 1875; *m.* 1884. *Address*: The Palace Bhuj, Kutch.
- LAHORE, BISHOP OF, since 1913, RT. REV. HENRY BICKERSTETH DURRANT, M.A., D.D.** *Educ.*: Highgate Sch.; Pembroke Coll., Camb.; Ch. Miss. Coll., Islington. Curate of St. Matthew's, East Stonehouse, 1894-95; C.M.S. Missionary, Lucknow, 1896; St. John's Coll., Agra, 1897. Vice-Prin., 1900; Prin., 1911; Fellow, Allahabad Univ., 1906; served European War, Mesopotamia (Kut-el-Amara), 1915 (despatches). *Address*: Bishopscourne, Lahore.
- LAKHTAR, CHIEF OF, THAKOR KARAN SINGHI VAJIRAJI, C.S.I.**, 1911; *b.* 1846. *Address*: Lakhtar, Kathiawar Agency, Bombay.
- LATIF, CAMRUDIN AMIRUDIN ABDUL, B.A.**; Mem. of Sec. of State's Adv. Comm. for Ind. Students; *b.* Cambay, 28 Sept. 1856; *Educ.*: Elphinstone Coll., Bombay; Bombay Univ.; practised as Vakil of Consular Courts, Zanzibar and Mombassa, 1880-93; Legal Adviser to successive Sultans of Zanzibar. Fellow, Bombay Univ.; J.P., Bombay; Hereditary Inamdar, Cambay State. *Address*: Chowpati, Bombay.
- LAWRENCE, HENRY STAVELEY, C.S.I., Kaiser-i-Hind Medal**; Commsr. in Sind, since 1916; *b.* 20 Oct. 1870; *m.* to Rosamond Napier, *d.* of Col. E. Napier, late Carabineers. *Educ.*: Haileybury, Magdalen College, Oxford. Arrived in India 1890; Under Sec. and Sec. to Govt. of Bombay, 1897-1902; Dir. of Land Records and Agriculture, 1902-06; Collr. in Sind, 1908-13; Commsr., Southern Divn., 1914-16. *Publications*: Paper on Indian Agriculture before the Royal Society of Arts, 1909. *Address*: Government House, Karachi.
- LEDGARD, SIR HENRY, Kt., cr.** 1915; Hon. Adviser to Govt. on boot production. *b.* 20 Dec. 1853; *m.* 1881, Florence Robertson. 10 years in a London Office; 8 years Secretary and Manager Secretary, The Muir Mills Co., Ltd., Cawnpore; 29 years with Cooper, Allen & Co., Ltd., Cawnpore, as partner, Managing Director and Advisory Director; President of the Upper India Chamber of Commerce, Cawnpore, 1901, 1912, 1913, 1914 and 1915, and represented that body on the Legislative Council of the United Provinces, India, 1912-15; Member of the Board of Industries of the U. P., 1914 and 1915; President of the Cawnpore Expansion Committee, 1913-15. *Address*: Torrentium Villa, Simla.
- LEFTWICH, CHARLES GERRANS, C.B.E.** (1919), Director of Civil Supplies, C. P. and Berar. *b.* 31 July 1872. *m.* Evadne Fawcus of

- Alnmouth, Northumberland. *Educ.*: Christ's Hospital and St. John's College, Cantab. Entered I.C.S. 1896. Served in C. P. *Address*: Nagpur, C. P.
- LEGGE, FRANCIS CECIL, C.B.E. (1919), Coal Transportation Officer, Railway Board. *b.* 14 September 1873. *Educ.*: Sherborne School. Traffic Department, E. I. Railway. *Address*: Bengal Club, Calcutta.
- LE MESURIER, HAVILLAND, C.S.I., C.I.E.; Mem. of Exec. Council, Bihar and Orissa, since 1917; *b.* 22 June 1866; *Educ.*: Rugby; Balliol Coll. Oxford. Entered I.C.S. 1884; Ch. Sec. to Govt. of E. Bengal, 1909; of Bihar and Orissa, 1912-16. *Address*: Cuttack.
- LESLIE-JONES, FREDERICK ARCHIBALD, Principal of Mayo College. *b.* 1874. *m.* Christiana Mary Baskett. *Educ.*: Bromsgrove and Lincoln College, Oxford. Assistant and House Master, Marlborough College. 1897-1904. Princ., Aitchison College, Lahore, 1904-1917. *Publication*. A view of English History. *Address*: Mayo College, Ajmere.
- LEVETT-YEATS, GERALD AYLMER, C.I.E., I.S.O., V.D.; Factory Suptd., Opium Dept., U.P., since 1903; *b.* 7 March 1863; *Educ.*: private tuition. *Address*: Ghazipur.
- LEY, THE HON. MR. ARTHUR HERBERT, C.I.E. (1918). Secretary to Government of India, Commerce and Industry Department. *b.* 7 November 1879. *Educ.*: Winchester and New College, Oxford. Entered I.C.S., 1903. Director General, Commercial Intelligence, 1914-16. *Address*: Simla.
- LINCOLN, ALBERT GEORGE, I.S.O.; Regr., N.-W. F. Prov. Secretariat, Peshawar, since 1905; *b.* Nov. 1861. *Address*: Peshawar.
- LINDSAY, HARRY ALEXANDER FANSHAW, C.B.E., Dir.-General of Commercial Intelligence. *b.* 11 March, 1881. *Educ.*: St. Paul's School, London; Worcester College, Oxford. *m.* Kathleen Louise Huntington. Entered I.C.S. *Address*: Bengal Club, Calcutta.
- LISTER, EDWARD, I.C.S., C.I.E.; Addl. Mem., Bihar & Orissa Leg. Council, and Sec., Rev. and Jud. Dept., since 1918. *Educ.*: Sheffield Gram. Sch.; Wadham Coll., Oxford. Entered I.C.S., 1893. *Address*: Hazaribagh.
- LISTON, LT.-COL. WILLIAM GLEN, C.I.E., M.D., D.P.H.; Dir. of Bacteriological Lab., Parel, and Sen. Mem. of Plague Res. Comm., since 1911; *b.* 30 July 1873; Major, 1910; Lt.-Col., 1918. Entered Bacteriological Dept., 1908. *Address*: Parel, Bombay.
- LITTLEHAILES, THE HON. MR. RICHARD, Director of Public Instruction, Madras, 1919. *b.* 14 February 1878. Joined I.E.S. 1903 as Prof. of Mathematics, Presidency College, Madras. *Address*: Madras.
- LOYD, CAPTAIN SIR GEORGE AMBROSE, G.C.I.E. (1918), D.S.O. (1917), C.I.E. (1917), Governor of Bombay since December 1918. *b.* 19 September 1879. *Educ.*: Eton and Cambridge. *m.* the Hon. Blanche, *d.* of Hon. Frederick Lascelles. M. P. (U.) West Staffs, 1910. Served in the European war, as Captain, Warwickshire Yeomanry, in Egypt, Gallipoli, Mesopotamia and the Hedjaz. Special Commissioner to report upon the future of British trade in Turkey, Mesopotamia and the Persian Gulf, 1908. *Address*: Bombay and Poona.
- LODGE, FRANK ADRAIN, C.I.E.; Insp. Gen. of Forests, Hyderabad (Deccan), since 1914; *b.* 4 Nov. 1861. *Educ.*: Eton. Ent. I.F.S., 1883; Conservator, 1906-14. *Address*: Hyderabad, Deccan.
- LOHARU, THE HON. NAWAB SIR AMIR-UD-DIN AHMED KHAN BAHADUR FAKHAR-UD-DULA. K.C.I.E.; *b.* 1860; S. 1884. Ruling Chief of Moghal tribe. For two years mem. of Imp. Leg. Council, and for two years Mem. of Punjab Council; attached to Pol. Dept. in Mesopotamia. *Address*: Loharu, Hissar.
- LOVETT, SIR HARRINGTON VERNY, K.C.S.I., C.S.I.; Mem., Board of Rev., U. P., since July 1918; *b.* 29 April 1864. *Educ.*: Sherborne Sch.; Balliol Coll., Oxford. Ent. I.C.S., 1884; has served in United Provinces. *Address*: c/o H. S. King & Co., Bombay.
- LOW, SIR CHARLES ERNEST, K.C.I.E. 1919, C.I.E., B.A.; Sec. to Govt. of India, Com. & Ind. Dept., since Aug. 1918; *b.* 1869. *Educ.*: Rugby; Wadham Coll., Oxford. Ent. I.C.S. 1893. Member of the Indian Industrial Commission, 1918.
- LUCKNOW, BISHOP OF (since 1910), RT. REV. GEORGE HERBERT WESTCOTT, D.D.; *Educ.*: Marlborough; Peterhouse, Cambridge (M.A.), Ordained, 1886. *Address*: Bishop's Lodge, Allahabad.
- LUNAWADA, MAHARANA SIR SHRI WAKHAT-SINHJI DALESINHJI, RAJAH OF, K.C.I.E.; *b.* 11 Aug. 1860; S. 1867; a Virpura Solunkhi Rajput; *Educ.*: Rajkumar Coll., Rajkot. *Address*: Lunawada, Rewa Kantha, Bombay.
- LYALL, FRANK FREDERICK, C.I.E., I.C.S.; Offg. Secy., Bihar and Orissa, since 1912; *b.* 12 June 1872. *Educ.*: Edinburgh Academy; Balliol Coll., Oxford. Ent. I.C.S., 1891. *Address*: Muzaffarpore.
- MACARTNEY, SIR GEORGE, K.C.I.E., C.I.E., Brit. Con.-Gen. at Kashgar, Chinese Turkestan, since 1911; *b.* Nankin (China), 19 Jan. 1867. *Educ.*: Dulwich Coll., France. Bachelor ès Lettres of Université de France. Ent. service of Govt. of India, 1889; received thanks of Government of India, 1906. *Address*: Kashgar, Chinese Turkestan, via Gilgit (Kashmir).
- MACKENNA, JAMES, C.I.E., I.C.S.; Agric. Adv. to Govt. of India, and Dir. of Pusa Inst. *Educ.*: Dumfries Academy; Edinburgh Univ.; Balliol Coll., Oxford. Ent. I.C.S., 1894. Dir. of Agriculture, Burma, 1906. President, Indian Sugar Committee, 1919. *Address*: Research Institute, Pusa.
- MACKENZIE, MAJOR JOHN, C.I.E.; 35th Sikhs; Comptroller of Household to following Viceroy of India; Earl of Minto, 1907-10; Lord Hardinge, 1910-16; Lord Chelmsford, 1916; *b.* 21 Sep. 1876. *Educ.*: Merchiston Castle Sch.; R.M.C., Sandhurst. *Address*: Viceregal Lodge, Delhi and Simla.

MACLAGAN, SIR EDWARD DOUGLAS, K.C.I.E., M.A., C.S.I.: Lt. Governor, Punjab, 1919. *b.* 1864. *Educ.*: Winchester; New Coll., Oxford. Ent. I.C.S., 1885; Under Sec., Govt. of India, Rev. and Agric. Dept., 1892; Ch. Sec. to Govt., Punjab, 1906; Sec. to Govt. of India, Rev. and Agric. Dept., 1910-14. Education Department, 1915. *Address*: Simla.

MACLEOD, JAMES JOHN, C.I.E.: Indigo planter, Tirhoot, India. *Educ.*: Edinburgh Inst. and Univ. of Edinburgh. Lt. Col., Behar Light Horse. *Address*: Lalseriah, Segowlic, Chumparun.

MACLEOD, HON. SIR NORMAN CRANSTOUN; Kt. (1919); Chief Justice, Bombay, 1919. *b.* 16 July, 1866. *Educ.*: Wellington Coll.; New Coll., Oxford. Called to Bar, 1890; Off. Assignce, Bombay, 1900; Mem. of Imp. Leg. Council, 1908. Puisne Judge, High Court, Bombay, 1910-19. *Address*: Mount Pleasant Road, Bombay.

MACMUNN, MAJ.-GEN. SIR GEORGE FLETCHER, K.C.B. (1917), K.C.S.I. (1919), D.S.O. (1893): Quartermaster General, India, 1920. *b.* 14 August 1869. *Educ.*: Kensington Grammar School. *m.* Alice Emily, *d.* of Col. J. R. Watson. Joined R. A., 1888. Served in Upper Burma, 1892, with Kohat Field Force and in the Tirah, 1897, S. African war and in European war. Gold Medallist, U. S. Institution, India, 1904. *Publications*: The Armies of India. A Free Lance in Kashmir. A Tale of the Great Anarchy. *Address*: Simla.

MACTAGGART, COLONEL CHARLES, C.S.I. 1919, C.I.E.: Insp.-Gen. of Civil Hosp. U.P., *b.* 1861. *Educ.*: Campbelltown Gram. Sch.; Glasgow Univ. Ent. I.M.S.; 1886; Insp.-Gen. of Prisons, 1902; Mem., Indian Factory Labour Commission, 1907-08; Mem. of U.P. Leg. Council, 1909. *Address*: Lucknow.

MACWATT, LT.-COL. ROBERT CHARLES, C.I.E.; *b.* 22 Jan. 1865. San. Commsr., Ch. Malaria and Plague Med. Officer and Insp.-Genl., Civil Hosps., Punjab; Mem., Punjab Leg. Council. *Address*: Lahore.

MCBAIN, JAMES ANDERSON DICKSON, C.I.E., J.P.: Manager for India Sun Life Assurance Co. of Canada; *b.* 24 April 1869. *Educ.*: Arbroath H. Sch.; Mem. of Leg. Council Bombay, 1913-1916; Mem., Bombay Mun Corp., since 1904 and President, 1917-18. *Address*: 13 Marine Lines, Bombay.

MCPHERSON, HUGH, C.S.I. 1919; B.A.; *b.* 3 May 1870; *Educ.*: Paisley Gram. Sch.; Glasgow Univ. Balliol Coll., Oxford. Passed into I.C.S., 1889; arrived India, 1891; Rev. Sec., Bihar and Orissa, 1912-15; Ch. Sec., Bihar and Orissa, since 1915. Addl. Mem., Prov. Leg. Council. *Address*: Patna and Ranchi.

MCWATTERS, ARTHUR CECIL, C.I.E. (1918), I.C.S. b. 13 September 1880. Educ. Clifton. Trinity College, Oxford. Joined I.C.S., 1904. Served in the U. P. Under Sec., Government of India, Department of Commerce and Industry, 1910-13. Wheat Commissioner, 1915. Controller of Hides and Wool, 1917. Chrmn. Board of Special Referees, Excess

Profits Duty Act, 1919. Secretary to Government of India Secretariat Procedure Committee, 1919. *Address*: U. S. Club, Simla.

M'CONAGHEY, LT.-COL. ALLEN, C.I.E.; Pol. Ag. and Dy. Commsr. in Quetta-Pishin, since 1907; *b.* 31 Mar. 1864; Ent. army, 1884. *Address*: Quetta-Pishin, Baluchistan.

M'IVER, JOHN ALEXANDER, I.S.O.; Supdt., Govt. Photographic Dept., Bombay C. S.; Land Rec. Dept., since 1906; *b.* 10 Sep. 1859. *Educ.*: privately; Yorkshire. Joined the B. C. S., 1880. *Address*: Poona.

M'WILLIAM, ANDREW, D. Met., A.R.S.M.; Metallurgical Insp. to Ind. Govt; services lent as Metallurgical Adviser to Tata Iron and Steel Co., Ltd., Jamsedpur; late Asst. Prof. of Metallurgy in Univ. of Sheffield. *Educ.*: Allan Glen's Sch., Glasgow; Roy. Sch. of Mines, London. In 1887 took Association of Roy. Sch. of Mines, 1st Class in Metallurgy. *Address*: Kalimati, B. N. Railway.

MADGE, WALTER CULLEY, J.P., C.I.E.; *b.* 27 Jan. 1841; *Educ.*: High Sch., Edinburgh. Ex-President, Anglo-Indian Association; Ex-Member, Viceroy's Leg. Council; Mem., Royal Commission Indian Public Services, 1912. *Address*: Calcutta.

MADHAVA RAO, V.P., C.I.E.; Dewan of Baroda since 1914. For 34 years in service of Mysore State in important capacities, being Mem. of Council of Regency, 1898-1902; Member of Exec. Council and Rev. Commsr.; Dewan of Travancore, 1904-06; Dewan of Mysore, 1906-09. *Address*: Baroda.

MADHAVLAL, SIR GIRIJA PRASAD, Bt.; *see* Runchorelal.

MADRAS, BISHOP OF, since 1899, RT. REV. HENRY WHITEHEAD, D.D. *b.* 19 Dec. 1853; *Educ.*: Sherborne; Trinity Coll., Oxford (Fellow); Lecturer, 1878-82; Tutor, 1882-03. Ordained 1879; Principal of Bishop's Coll., Calcutta, 1883-99; Superior of Oxford Mission, Calcutta, 1890-99. Acting Metropolitan, 1919. *Address*: Bishop's House, Madras.

MAFFEY, JOHN LOADER, C.I.E., I.C.S.; Priv. Sec. to Lord Chelmsford; *b.* 1 July 1877; *Educ.*: Rugby; Christ Church, Oxford. Ent. I.C.S., 1899. *Address*: Viceregal Lodge, Simla.

MAHAJANOBIS, S. C. B. Sc., F.R.S.E., F.R.M.S.; Prof. of Physiology, and Dean, Presidency Coll., Calcutta, since 1900; *b.* Calcutta, 1867. *Educ.*: Edinburgh Univ. *Address*: 210, Cornwallis Street, Calcutta.

MAHDI HASAN, M.A. (Cantab.), I.S.O.; Barrister (Inner Temple); Dy. Commsr., C.P. *b.* 1859. *Address*: Drug, C.P.

MAHDI HUSAIN, KHAN WAHUD-UD-DAULA, AZOD-UL-MULK, NAWAB MIRZA, KHAN BAHADUR, C.I.E.; *b.* 1834. *Educ.*: India, Arabia. Travelled extensively in Arabia, Persia, Afghanistan, Baluchistan, and Europe; visited Mecca, Medina, Kaymanli. *Address*: Tirmingaz, Lucknow.

MAHUMUDABAD, RAJA OF, SIR ALI MOHAMMAD KHAN, KHAN BAHADUR, K.C.I.E.: Member of Imp. Leg. Council; Pres. of All India Muslim League; President of Muslim Univ. Ass. b. 1877. *Educ.:* privately. *Address:* Mahmudabad House, Kaiserbagh, Lucknow.

MAHOMED, KHAN BAHADUR, NAWAR SYED, I.S.O.: Ent. Govt. Service, 1873; Insp.-Gen. of Registration, Bengal; retired, 1913; a distinguished Urdu scholar and dramatist; wrote *The Nawabi-Darbar*, first drama in Urdu on English lines. *Address:* 82, Toltohati Lane, Calcutta.

MALAVIYA, HON. PANDIT MADAN MOHAN; President of National Congress, 1909 and 1918; b. Allahabad, 25 Dec. 1862; *Educ.:* privately in Hindi and Sanskrit; Muir Central Coll., Allahabad. Edited *The Hindustani*; LL.B., Allahabad Univ, 1892; Member, Prov. Leg. Council, 1902-12; Member, Imp. Leg. Council, since 1910. *Address:* Allahabad.

MALER KOTLA, HON. KHAN, SIR ZULFIGAR ALI KHAN, K.C.S.I., C.S.I.; estate holder in Maler Kotla State; member of Imp. Council representing Mohamedan community of Punjab; Ch. Minister of Patiala State, since 1911; b. 1875; *Educ.:* Chiefs Coll., Lahore; Cambridge; Paris. *Address:* Lahore.

MALIK MOHAMMED UMAR HYAT KHAN (TIWANA), CAPTAIN HON. SIR, K.C.I.E., M.V.O.; Member of Imp. Council, since 1910; Hon. Major in Army, 1917; b. 1875. *Educ.:* Chiefs' Coll., Lahore. One of largest landholders in Punjab. Attaché to H.M. the Amir, 1907; Deputy Herald, Delhi Durbar, 1911. *Address:* Kalra, Shahpur.

MAILIK, DEVENDRA NATH, B.A. (Cantab); Sc. D. (Dub.), F.R.S.E.; Prof. of Mathematics, Presidency Coll., Bengal, since 1908; b. Bengal 1866. *Educ.:* St. Xavier's Coll., Calcutta; Univ. Coll., London; Peterhouse, Cambridge. *Publications:* Numerous works on Mathematics. *Address:* Astronomical Observatory, Presidency College, Calcutta.

MALLIK, MANMATH C.; b. Oct. 1853; called to Bar, 1875; contested (L.) St. Georges Hanover Square, 1906; Oxbridge Division, 1910; Fellow, Zoological Society of London. *Address:* 241 Lower Circular Road, Calcutta.

MANIPUR, RAJA CHURA CHAND, RAJA OF; b. 1886; s. 1891. State has area of 8,000 sq. miles, and a population of 284,465. Salute 11 guns. *Address:* Manipur, Assam.

MANGALORE, R. C. Bishop of; see Perini.

MANN, HAROLD HART, D. Sc., F.I.C., F.L.S.; Principal, Agricultural College, Poona and Agricultural Chemist to Govt. of Bombay, since 1907; b. 16 Oct. 1872; *Educ.:* Elmfield Sch., York; Yorkshire Coll., Leeds. Pasteur Inst., Paris; Chemical Asst. for Research to R. A. S. 1895-98; Scientific Officer to Ind. Tea Assoc., Calcutta, 1900-07. *Publications:* Numerous, on questions relating to tea culture and manufacture, and many other Indian agricultural questions (with Sir G. Watt); *The Pests and Blights of the Tea Plant;*

also on sociological subjects. *Address:* Agricultural College, Poona.

MANT, REGINALD ARTHUR, C.S.I. (1919), B.A., Sec. to Govt. of India, R. and A. Dept. since 1918. Offg. Member of Governor-General's Council. b. 27 September 1870. m. Elleen Gertrude d. of Col. E. O. Tandy, I.M.S. *Educ.:* Maryborough Gr. School, Queensland, and Trinity College, Oxon. Joined I.C.S. 1893. Under Secretary to Government of India, Finance Department, 1901, 1904-05. Offg. Joint Secretary, Military Finance Branch, 1908. Financial Secretary, Punjab, 1910-15. *Address:* Simla and Delhi.

MARRIS, SIR WILLIAM SINCLAIR, K.C.I.E.; Joint Secy., Govt. of India, Home Dept. b. 1873; *Educ.:* Wanganui, N.Z.; Canterbury Coll., N.Z.; Christ Church, Oxford. Passed I.C.S., open, 1895; Under Sec. to Govt. of India, 1901; Dy. Sec. to Govt. of India, 1904; service lent to Transvaal Govt., 1906; C.S. Commr., Transvaal, 1907; Ag. Secy. to Govt. of India, Home Depart., March to May 1913; Ag. Insp.-Gen. of Police, U.P., 1916; Spec. duty in connection with Montagu-Chelmsford Reforms Scheme, 1917-18. *Address:* Simla.

MARSHALL, SIR JOHN HUBERT, Kt., cr., 1914; C.I.E., 1910; M.A., Litt. D., F.S.A., Hon. A.R.I.B.A.; Vice-President of the India Society; Director General of Archaeology in India since 1902; b. Chester, 19 March 1876; m. 1902 Florence, y. d. of Sir Henry Longhurst, C.V.O. *Educ.:* Dulwich; King's College, Cambridge (scholar). Craven Travelling student; made journeys of exploration in Greek lands. *Address:* Benmore, Simla.

MARSHALL, LT.-GEN. SIR WILLIAM RAINE, K.C.B. (1917); K.C.S.I. (1918); C. B. (1916). G.O.C. Southern Command since November 1919. b. 29 October 1865. Served N. W. Frontier, 1897, Tirah 1897, S. Africa 1899-1902. European War 1914-16. G.O.C. in Mesopotamia, 1917-19. *Address:* Poona.

MARTEN, HON. MR. JUSTICE AMBRESON BARRINGTON, LL.D., M.A.; Puisne Judge of Bombay High Court since 1916, b. 8 Dec. 1870; e. s. of late Sir Alfred Marten, K.C., M.P. *Educ.:* Eton; Trinity College, Cambridge (1st Class Law Tripos); Called to Bar Inner Temple, 1895; Mem. of Bar Council, 1909-10; practised in Chancery Division, 1916. *Address:* High Court, Bombay.

MASANI, RUSTOM PESTONJI, M.A., J. P., Kaiser-i-Hind Silver Medal; Mun. Sec., Bombay; and Asstt. Munl. Commissioner, 1919. b. 23 Sept. 1876. *Educ.:* New H. S. and Elphinstone Coll. Jt. Propr. and Editor of *Gup Sup.* (1898); Editor of English columns of *Kaiser-i-Hind* (1899-1900); Editor, *Indian Spectator* (1901-02). Was Hon. Sec. to Bombay Food Prices Committee (1914-17); *Publications*—English; Child Protection; Folklore of Wells, Gujarat; *Dolatno Upayog* (Use of Wealth); *Gharhi tatha nishalni kelurni* (Home and School education); *Jansukh mala* (Health series); and novels named *Abyssinian Habshi*; *Bodhhi Chandra Chal*. *Address:* Versova (via Andheri Station).

- MASOOD, SYED ROSS**, Director of Public Instruction, Hyderabad (Deccan). *b.* 1889. *Educ.*: M.A.O. College, Aligarh, and New College, Oxford. Bar-at-law. Imperial Education Service. Headmaster. Patna School, 1913. Senior Prof. of history, Ravenshaw College, Cuttack, 1916. *Address*: Hyderabad.
- MAUDE, SIR WALTER**, K.C.I.E. (1920), C.S.I.; *Educ.*: Highgate Sch.; Balliol Coll., Oxford. Ent. I.C.S., 1881; Commissioner, 1905, Mem., Board of Rev., Bihar and Orissa, 1912-17; Mem., Exec. Council, since 1917; Mem., Prov. Leg. Council. *Address*: Ranchi.
- MAW, WILLIAM NAWTON**, C.I.E., I.C.S.; Offg. Commr., Nerbudda Div., C. P., since Feb. 1918; *b.* 1 Aug. 1869; *Educ.*: Wesley Coll., Sheffield; St. John's Coll., Cambridge (B.A.), Ent. I.C.S., 1893; in Secretariat respectively, as third, second, and Chief Secretary, 1906-12. *Address*: Hoshangabad.
- MAXWELL, SIR WILLIAM**, K.C.I.E., C.I.E., M.V.O.; Managing Director, Grace Bros. (India.) Ltd.; late Director-General of Posts and Telegraphs; *b.* 3 Jan. 1870; *m.* 1894, Elizabeth, *d.* of D. Harper. *Educ.*: Queen's Coll., Belfast; Trinity Coll., Dublin. Ent. I.C.S. 1889; *Address*: 4, Russell Street, Calcutta.
- MAYHEW, ARTHUR INNES**, Director of Public Instruction, Central Provinces. *b.* 27 September 1878. *m.* Mary Catherine, daughter of the late Sir James Davies, High Court Judge, Madras. *Educ.*: Winchester and New College, Oxford. (1st class Lit. Hum.) Inspector of Schools, Madras. *Educ.* Adviser to the Nizam's Government. *Address*: Nagpur, C. P.
- MAZUMDAR, THE HON. BABU AMBIKA CHARAN**, Member, Bengal Legislative Council. *b.* 1851. *Educ.*: at Barisal and Calcutta. Pleader; President, Indian National Congress, 1916. *Publication*: Indian National Evolution. *Address*: Faridpur, Bengal.
- MEAD, PERCY JAMES**, C.I.E. (1914), Ch. Sec. to Govt. of Bombay, 1919. *b.* 15 November 1871. *Educ.*: Haileybury, and King's Coll., Cambridge. *m.* first, Frances Alexandra Cowie, and, secondly, May Gertrude Maddock. Joint author of Bombay Census Report, 1911. *Address*: The Secretariat, Bombay.
- MEARES, J. WILLOUGHBY**, F.R.A.S., M. INST. C.E., M.I.E.E.; Electrical Adv. to Govt. of India, since 1904; *b.* 1871. *Educ.*: Winchester; Univ. Coll., London. *Address*: Electrical Adviser's Office, Simla.
- MEARS, SIR GRIMWOOD**, Kt. (1917), Ch. Justice, Allahabad, 1919. *Educ.*: Exeter College, Oxford. Barrister, 1895; Hon. Sec. to Bryce Committee on German Outrages; Sec. to R. Com. on rising in Ireland, 1916; Sec. to the Dardanelles Commission, 1916. *Address*: Allahabad.
- MEHTA, KHAN BAHADUR, SIR BEZONJI DADABHOY**, Kt. *Address*: Nagpur.
- MEHTA, CHUNILAL VIJBHUCANDAS**, Merchant and Mill-owner; *b.* 12 January 1881. *m.* to Tarabai Chandulal Kankodiwala. Educated at St. Xavier's College, Bombay. Captain Hindu XI; elected to the Bombay Municipal Corporation in 1907; Chairman, Standing Committee, 1912; President of the Corporation, 1916; Elected to the Bombay Legislative Council by the Corporation in 1916; elected to the City Improvement Trust, 1918, and Chairman of the Indian Merchants' Chamber, 1918. *Address*: 108, Ridge Road, Malabar Hill, Bombay.
- MEHTA, MANUBHAI NANSHANDKAR**, C.S.I. (1919), M.A., LL.B.; Diwan (Prime Minister) of Baroda, since 1916; *b.* 22 July 1868; *Educ.*: Elphinstone Coll., Bombay. Priv. Sec. to Gaekwar, 1899-1905; Rev. Min. and First Counsellor, 1914-16. *Address*: Baroda.
- MEHTA, ROOSTUMJEE DHUNJEEBHAY**, J.P. C.I.E.; Merchant; Sheriff of Calcutta, 1893; Consul for Persia at Calcutta, 1899-1904. *Address*: 9, Rainey Park, Ballygunge, Calcutta.
- MEKRAN, NAZIM OF**, C.I.E.; a tribal chief of Baluchistan, whose territory forms the northern littoral of Gulf of Oman. *Address*: Mekran, Baluchistan.
- MEREDITH, RICHARD**, C.S.I., (1919), C.I.E.; Dy. Dir.-Gen. (Tel. Traffic), 1914-18; Ch. Eng. Telegraphs, Simla, 1918. *b.* 21 May 1867; *e.s.* of late Sir James Creed Meredith. *Educ.*: Royal Sch., Armagh; Trinity Coll., Dublin; R.I.E. Coll. *Address*: Simla.
- MESSENT, PHILIP GLYN**, M. INST. C.E., C.I.E.; Chief Engineer, Bombay Port Trust. *b.* 26 June 1862. *Educ.*: Charterhouse. Articled pupil and Assistant to his father Philip J. Messent, M. Inst. C.E. Ch. Eng. to Tyne Improvement Commissioners, 1880-84; Asst. Eng. to Bombay Port Trust, 1884-99, Ch. Eng. since 1899; has carried out many important works, including Alexandra Dock (50 acres) and Hughes Dry Dock, also construction of Port Trust Railway and Mazagon-Sewree Reclamation. *Address*: Bombay Port Trust, Bombay.
- MEULEMAN, MOST REV. BRICE**, S.J.; Catholic Archbishop of Calcutta, since 1902; *b.* Ghent, 1 March 1862. *Educ.*: St. Barbe's Coll., Ghent. Joined Soc. of Jesus, 1879; nominated Superior of Jesuit Mission in Bengal, 1900. *Address*: Calcutta.
- MILLER, HENRY**, C.I.E.; Mem., Leg. Council, Assam. *Address*: Shillong, Assam.
- MILLER, SIR LESLIE**, Kt. (1914), C.B.E. (1919). Chief Judge, Mysore, since 1914. *b.* 28 June, 1862. *m.* Margaret Lowry, O.B.E. *Educ.*: Charterhouse, and Trinity College, Dublin. Entered I.C.S., 1881. Judge of the Madras High Court, 1906-14. *Address*: Abshot, Bangalore.
- MILLER, SIR THOMAS FREDERICK DAWSON**, Kt., K.C., Ch. Justice of Patna High Court, since 1917; *b.* Dec. 1867; *Educ.*: Durham Sch. and Trinity Coll., Oxford; Bar., Inner Temple, 1891. *Address*: High Court, Patna.

MINCHIN, LT.-COL. ALFRED BECKETT, C.I.E. : 1st Asst. Resident, Hyderabad, since 1908; *b.* 3 Dec. 1870. Ent. army, 1891; Captain, 1901; Major, 1909; served Isazai Exp., 1892; Chitral Bel. For., 1895; Malakand and Swat, 1897; Asst. to Gov.-Gen'l's Agent, Rajputana, 1898-1904; Pol. Ag., Bundelkund, 1902; Sec. to Gov. of India, For. Dept., 1908. *Address :* Hyderabad.

MINCHIN, LT.-COL. CHARLES FREDERICK, D.S.O. : Div. and Sess. Judge, Derajat, since 1911; *b.* 22 Sept. 1862; *Educ.* Cheltenham U.S. Coll., Westward Ho; R. M. C., Sandhurst. Joined Ind. Staff Corps, 1885; Pol. Ag. Dir, Swat, Chitral, N.-W. F. Prov., 1907-08; Dy. Commr., Bannu, 1908-11; served with S. African F. F., 1899-1902. *Address :* Dera Ismail-Khan.

MITTER, SIR BINOD CHUNDER, KT. (1918), Barrister and Advocate, Calcutta. *b.* 1872. *m.* Miss Charushilla De. *Educ.* : Presidency College and Ripon College. Twice officiated as Advocate-General, Bengal: Vice-President, National Liberal League; Member of Moderate Deputation to England, 1919. *Address :* 10, Elysium Row, Calcutta.

MODI, JIVANJI JAMSHEDJI, SHAMS-UL-ULAMA (1893), C.I.E. (1917), Sec., Parsi Panchayat, Bombay. b. 26 October 1854. *Educ.* : Elphinstone High School, Elphinstone College. *m.* Shirinbai, *d.* of the late H. N. Shaklatwala. Has published numerous historical and antiquarian works chiefly dealing with Parsi history and religion. Is Ph. Doc. (Hon.) Heidelberg, and Officer de l'Instruction publique. Received the Campbell Gold Medal, Bombay Branch R. Asiatic Society (1917). *Address :* 1 Wodehouse Road, Bombay.

MODY, HORMUSJI PEROSHAW, M.A. (1904), LL.B. (1906); Advocate, High Court, Bombay; *b.* 23 Sept. 1881; *Educ.* : St. Xavier's Coll., Bombay. Mem. of Bombay Mun. Corp. and its Standing Committee. *Publications :* The Political Future of India (1908). *Address :* Cumballa Hill, Bombay.

MOIR, THOMAS EYEBRON, C.I.E. ; Priv. Sec. to Gov. of Madras. *Educ.* : Fettes Coll., Edinburgh; Wadham Coll., Oxford. Ent. I.C.S., 1897. *Address :* Government House, Madras.

MOLONY, JOHN CHARTRES, M.A., I.C.S. ; President, Madras Corporation, since 1914; *b.* 27 Feb. 1877; *Educ.* : Port Royal Sch., Enniskillen; Trinity Coll., Dublin. Asst. Pol. Agent, Banganapalle State, 1905-09; Supdt. of Census, Madras, 1910-11. *Address :* Ripon Buildings, Madras.

MONIE, PETER WILLIAM, C.S.I. (1920); M.A. (Glasgow), B.A. (Oxon.); Municipal Commr., Bombay; *b.* 30 March 1877; *Educ.* : Irvine Royal Acad.; Glasgow Univ.; Balliol Coll., Oxford; I.C.S., Asst. Collr.; Asst. Judge; Under-Sec. to Govt.; Under Sec. to Govt. of India, Home Dept.; Ag. Collr.; Sec. to Govt., General Dept. *Address :* 16, Mount Pleasant Road, Malabar Hill.

MONRO, GEN. SIR CHARLES CARMICHAEL, G.C.B., G.C.M.G., G.C.S.I., Grand Officer, Legion of Honour; Commander-in-Chief, India, since 1916; commdg., 1st Army Corps, 1915-1916; *b.* 15 June 1860; *m.* 1912, Hon. Mary Towneley O'Hagan, *d.* of 1st Baron O'Hagan. Ent. army, 1879; Col., 1903; Lt.-Gen. 1915; Gen. 1917; *Address :* Delhi.

MOOKERJEE, SIR ASUTOSH SARASWATI, SASTRAVACHASPATI, Kt., C.S.I., M.A., D.L., D.Sc. ; *ex* Judge of Calcutta High Courts since 1904; Vice-Chancellor of Univ. of Calcutta, since 1906; *b.* 28 June 1864; *Educ.* : S. Suburban Sch.; Presidency Coll.; City Coll.; Fellow and Syndic of Calcutta Univ. since 1889; Add. Mem. of Imp. Council, 1903-04; Fellow of numerous learned societies. *Address :* 77, Russa Road North, Bhowanipur, Calcutta.

MOOKERJEE, HON. SIR RAJENDRA NATH, K.C.I.E., C.I.E. ; Civil Engr.; *b.* 1854; *Educ.* : London Missionary Sch. at Basirhat; Presidency Coll., Calcutta. Senior Partner in Martin & Co., Calcutta; Mem. of Indian Industrial Commission; of Bengal Leg. Council; of Board of Trustees for Improvement of Calcutta; a Fellow of Calcutta Univ.; Mem. of Court of Visitors, Ind. Inst. of Science; Sheriff of Calcutta, 1911; Mem., Bengal Leg. Council. *Address :* 7, Harington Street, Calcutta.

MOORE, PIERCE LANGRISHE, C.I.E. ; Insp. Gen. of Police, Madras, since 1914; *Educ.* : Cheltenham; Christ Church, Oxford. Ent. I.C.S., 1896; President, Madras Corporation, 1910-14. *Address :* Madras.

MORVI, H. H. THAKUR SAHEB SIR WAGHJI RAVAJI, G.C.I.E. ; *b.* 7 April 1858; S. 1870. *Educ.* : Rajkumar Coll. State has area of 822 sq. miles and population of about 90,000. *Address :* Morvi, Kathiawar.

MOUNTFORD, LEWIS JAMES, C.B.E. ; Commissioner, Southern Division, Bombay Presidency. *b.* 1 August 1871. *Educ.* : Dulwich Coll. and Pembroke Coll. (Cantab.). Joined I.C.S. Asst. Collr., 1892; Manager of Sind Encumbered Estates, 1896; Collr. of Larkhana, 1903; Spl. Collr., Bombay, 1905; Collr., Sholapur, 1907; Satara, 1911; Poona, 1913; Ahmedabad, 1916. *Publications :* Pamphlet on the Relations between Debtor and Creditor in Sind. *Address :* Belgaum.

MUDDIMAN, ALEXANDER PHILLIPS; C.S.I. (1920); C.I.E. ; Sec. to Govt. of India, Leg. Dept., since 1915; Addl. Mem., Imp. Leg. Council. *b.* 14 Feb. 1875. *Educ.* : Wimborne Sch. Ent. I.C.S., 1897; served in Behar in various capacities. Dy. Sec., Govt. of India, Leg. Dept., 1910-15.

MUDHOLKAR, HON. RAO BAHADUR RANGNATH NARSINH, C.I.E., B.A., LL.B. ; Pres., Ind. Nat. Congress, 1912; Advocate, Central Provinces and Berar; Pres., Amraoti City Municipality. *b.* 16 May 1857. *Educ.* : Dhulia High Sch.; Elphinstone Coll., Bombay (Fellow). Pres., Ind. Industrial Confee., 1908; Delegate of Ind. Nat. Congress to England, 1890; Mem., Imp. Council, 1910-12; Mem., C. P. Council, since 1914. *Address :* Amraoti.

- MUKHARJI, S. NARAYAN**, Zamindar of Uttarpara, near Calcutta. *b.* April, 1859. Elected Member, Bengal Leg. Council, 1918. *Publications*: "Early Poems" and a Memoir of Roy Kissen Mukharji. *Address*: Uttarpara, Bengal.
- MULJI, VASANJI TRIKAMJI, RAO SAHIB, SIR, KT., J.P.**; Hon. Magistrate; Mem., Bombay Cotton Exchange; *b.* 8 July 1866. *Address*: Malabar Hill, Bombay.
- MULLICK, SIR BISANTA KUMAR, KT. (1920)**; Judge, Patna High Court, since 1916. *Educ.*: Univ. Col. Sch.; King's Coll., Cambridge. Ent. I.C.S., 1887; Actg. Judge, Calcutta High Court, 1913; Puisne Judge, 1915. *Address*: Bankipore.
- MUMTAZUD DOWLAH MUHAMMAD FAIYAZ ALI KHAN, NAWAB OF PAHASU, K.C.V.O.**; Minister, Jaipur State; *b.* 4 Nov. 1851; late member of Supreme and Provincial Legislative Councils. *Address*: Nawab's House, Jaipur.
- MURSHEDABAD, NAWAB BAHADUR OF, K.C.S.I., K.C.V.O.**, The Hon. Intisham-ul-Mulk, Rais-ud-Dowla, Amir-ul-Omrah, Nawab Asef Kudr Syud Wasef Ali Meerza, Khan Bahadur, Mahabub Jung; premier noble of Bengal, Behar and Orissa; 38th in descent from the Prophet of Arabia; *b.* 7 Jan. 1875; *m.* 1898, Nawab Sultan Dulin Fugfoor Jahan Begum Saheba. *Educ.*: in India, under private tutors and in England, at Sherborne, Rugby, and Oxford; has six times been Mem. of Bengal Leg. Council. *Address*: The Palace, Murshidabad.
- MURTRIE, DAVID JAMES, I.S.O.**; Dy. Dir.-Gen., Post Offices, since 1917; *b.* 18 Dec. 1864; *Educ.*: Doveton Prot. Coll., Madras. Ent. Govt. Service in Post Office, 1884; Pres. Postmaster, Bombay, 1913-16. *Address*: G.P.O., Simla.
- MURZBAN, MUNCHERJEE COWASJEE, KHAN BAHADUR, C.I.E.**; *b.* 7 July 1839. *Educ.*: Elphinstone Inst., Bombay; Poona Coll.; Poona Sch. of Engineering. Rendered distinguished service in P. W. D.; Ex. Eng. of Bombay City, till 1903; President of Bombay Corporation, 1890; Sheriff of Bombay, 1906. *Address*: Gulestan, Murzban Road, Bombay.
- MUSPRATT-WILLIAMS, LT.-COL. CHARLES AUGUSTUS, C.I.E., R.G.A.**; Ch. Insp. of Explosives with Govt. of India since 1898; *b.* 13 Sep. 1861. Ent. Army, 1881; Lieut.-Col., 1909. *Address*: Explosives Office, Calcutta or Simla.
- MYSORE, H.H. MAHARAJA OF, SRI KRISHNARAJA WADIYAR BAHADUR, G.C.S.I.**; *b.* 4 June 1884; *s.* father, 1895. Invested with full ruling powers by Lord Curzon, at Mysore, 1902; present at Delhi Durbar, 1903. Area of State is 29,444 square miles, and has population of nearly 6,000,000. *Address*: The Palace, Bangalore, Mysore; Fern Hill, Ootacamund.
- MYSORE, YUVARAJA OF, SIR SRI KANTIRAJA, NARASIMHARAJA WADIYAR BAHADUR, G.C.I.E., K.C.I.E.**; Extraordinary Mem. of Council in Mysore; *b.* 5 June 1888; *y. s.* of late Maharaja Sri Chamarajendra Wadiyar Bahadur. Takes keen interest in welfare of people and in all matters of education, health, and industry. *Address*: Mysore.
- NABHA, MAHARAJA SRI RIPUDAMAN SINGHI MALAVENDRA, BAHADUR OF, F.R.G.S.; M.R.A.S.**; *b.* 14 March 1883; *S.* 1911. *Educ.*: privately. Travelled good deal in India and abroad; Mem., Viceroy's Council, 1906-08; Pres. of Ind. Nat. Soc. Confee., 1909; attended Coronation of King, accompanied by Maharani, 1911; made handsome contributions towards various War Funds and Loans including gift of fully-equipped Hospital Ship for Mesopotamia. *Address*: Nabha, Punjab.
- NAGOD, RAJA JADUBIND SINGH, RAJA OF; b. 30 Dec. 1855; *S.* 1874; dynasty has ruled at Nagod for over nine centuries; State has area of 501 square miles, and population of 84,097; salute 9 guns. *Address*: Nagod, Bagh-lekhand.**
- NAGPUR, BISHOP OF, since 1903, RIGHT REV. EYRE CHATTERTON, D.D., F.R.G.S.**; *b.* 22 July 1863; *Educ.*: Haileybury; Dublin Univ.; ordained 1887. *Address*: Bishop's House, Nagpur.
- NAGPUR R. C. BISHOP OF; see Coppel.**
- NAIDU, SARAJINI**; Fellow of Roy. Soc. of Lit. in 1914; *b.* Hyderabad, Deccan, 13, Feb. 1879. *Educ.*: Hyderabad; King's Coll., London; Girton Coll., Cambridge. Published three volumes of poetry in English, which have been translated into all Indian vernaculars, and some into other European languages; also been set to music; lectures and addresses on questions of social, religious, and educational and national progress; specially connected with Women's Movement in India, and welfare of Indian students. *Address*: Hyderabad, Deccan.
- NAIR, MANNATH KRISHNAN**, Dewan of Travancore, since 1914. *b.* August 1870. *Educ.*: Alathur; Calicut; and Christian College and Law College, Madras. Vakil, Calicut Bar, Ch. Justice, Travancore High Court, for four years. Dewan Bahadur (1915). *Address*: Tivandrum.
- NAIR, see Sankaran Nair.**
- NANAK CHAND, MASHERUD-DOWLA, RAI BAHADUR, C.S.I., C.I.E.**, Sirdar and Jagirdar of Indore State; *b.* 1860; *Educ.*: Delhi and Indore. Minister, Indore State, 1895-1913 (except for ten months). *Address*: Santoshkuti, Indore; Mohalla Dassa, Delhi.
- NANJUNDAYYA, H. VELPANURU, C.I.E.**; *b.* 13 Oct. 1860; *Educ.*: Wesleyan Mission Sch., Mysore; Christian Coll., Madras; Madras Univ. (Fellow, 1895). Ent. service of Mysore Govt., 1885; Judge, Chief Court of Mysore, 1904; Mem. of Council and Ch. Judge of Chief Court; retired 1916; Vice-Chancellor, Mysore Univ. *Address*: Mallesvaram, Bangalore.
- NARAINA RAU, KALLE, DIWAN BAHADUR; Sen. H. C. Vakil, Madras, b. 1862; *Educ.*: Govt. Coll., Mangalore; Presidency Coll., Madras. Ent. Bar, 1885. Prof. of Madras Law Coll., 1891-1903, and for a time its Principal. *Address*: Coleman's Gardens, Vepery, Madras.**

NARIMAN, SIR TEMULJI BHICAJI, KT., Chief Physician, Parsi Lying-in Hospital; Vice-President, College of Physicians and Surgeons; *b.* Naosari, 3 Sep. 1848; *Educ.*: Grant M.C.; Elphinstone Coll.; Fellow of Bombay Univ., 1883; J.P.; a Syndic in Medicine, 1891; a Dean in Faculty of Medicine, 1901-02; mem., Bombay Leg. Council, 1909; mem. of Provincial Advisory Committee, 1910. *Address*: Bombay.

NARSINGARH, H. H. SRI HUZUR RAJA SIR ARJUN SINGHJI SAHIB BAHADUR OF, K.C.I.E.; *b.* 10 Jan. 1887; belongs to Paramar or Ponwar branch of Agnikal Rajputs; *S.* 1897. *Educ.*: Mayo Coll.; Imp. Cadet Corps. Invested 1909; State is 734 sq. miles in extent, and has population of 109,854; salute of 11 guns. *Heir*: s. Shri Maharaja Kumar Shri Vikram Singh Bahadur, *b.* 21 Sept. 1909. *Address*: Narsingharh.

NATARAJAN, KAMAKSHI, B.A. (Madras University) 1889; Editor, *The Indian Social Reformer*, Bombay; *b.* 24 Sept. 1868. *Educ.*: St. Peter's H. S., Tanjore; Pres. Coll., Madras; Govt. Coll., Kumbakonam; and Law Coll., Madras. Headmaster, Aryan H. S. Triplicane, Madras; Asst. Editor, the *Hindu*, Madras; Fellow of Bombay Univ. and Mem. of Syndicate (1918); Mem., Bandra Municipality; Pres., Madras Prov. Soc. Confee., Kurnool, 1911; and Pres., Bombay Prov. Soc. Confee., Bijapur, 1918. *Publications*: Presidential addresses at above conferences: Report of Census of Hyderabad (Deccan) 1911. *Address*: *The Indian Social Reformer* Office, Fort, Bombay, and Tata's Bungalow, Khar Road, Bandra, Bombay.

NATESAN, G.A., head of G. A. Natesan & Co. and Editor, *The Indian Review*. *b.* 25 August 1879. *Educ.*: High School, Kumbakonam; St. Joseph's College, Trichinopoly; H. H. School, Triplicane; Madras University B.A. (1897). Fellow of the University and Commissioner, Madras Corp'n. Has taken a leading part in Congress work. Joined Moderate Conference, 1919. Sec., Madras Liberal League. *Publications*: chiefly patriotic literature and speeches, etc., of public men. *Address*: 60, Thambu Chetty Street, Madras.

NATHUBHAI, TRIBHOVANDAS MANGALDAS, J.P.; Hon. Mag. and Fellow of Univ., Bombay; Sheth or head of Kapol Banya community; resigned presidentship after tenure thereof for 25 years, 1912. *b.* 28 Oct. 1856. *Educ.*: St. Xavier's Coll., Bombay. Was for 20 years an elected Mem. of Bombay Mun. Corp'n; has been Hon. Mag. since establishment of Courts of Bench Magistrates in Bombay. *Address*: Sir Mangaldas House, Lamington Road, Bombay.

NAWANAGAR, H. H. MAHARAJA JAM SAHEB OF, KUMAR SHRI RANJITSINGHI, K.C.S.I.; Hon. Major in army; *b.* Sarodar, 10 Sept. 1872; *Educ.*: Rajkumar Coll., Rajkot; Trinity Coll., Cambridge. First appearance for Sussex C. C. C., 1895; head of Sussex averages same year; head of Sussex averages, 1895-1902; champion batsman for all England in 1896 and 1900, scoring 2,780 runs with an average of 59.91; went with Stoddart's All

England XI. to Australia, 1897-98; served European War, 1914-15. *Address*: Nawannagar, Kathiawar; Thorncote, Staines.

NEPAL, MAHARAJA SIR CHANDRA SHUM SHERE JUNG BAHADUR RANA, G.C.B., G.C.S.I., G.C.V.O., D.C.L., (Oxon, 1908); F.R.G.S., Hon. Lieut.-Gen. in British Army; Hon. Colonel of 4th Gurkha Rifles; Thong-lin-pimura-kokang-wang-syan (Chinese 1902); Prime Minister and Marshal of Nepal; *b.* 8 July 1863. *Educ.*: Durbar H. S., Kathmandu. Entered army as a Colonel: Commander-in-Chief, 1901; Maharaja, Prime Minister, and Marshal 1901; during European War, 1914, presented 31 machine guns, first gift of munitions, to the King, and placed whole of military resources of State at King's disposal. *Address*: Singha Durbar, Kathmandu, Nepal.

NEUBOULD, HON. MR. BABINGTON BENNETT; Puisne Judge, High Court, Calcutta, since 1916; *b.* 7 March 1867. *Educ.*: Bedford Sch.; Pembroke Coll., Cambridge. Ent. I.C.S., 1885. *Address*: 10, Harington Mansions, Calcutta.

NIHAL SINGH, REV. CANON SOLOMON, B.A.; Evangelistic Missionary; *b.* 15 Feb. 1852; *Educ.*: Govt. H. S., Lakhimpur; Canning Coll., Lucknow, ordained 1891; Hon. Canon in All Saints' Cathedral, Allahabad, 1906. *Address*: 2, Pioneer Road, Allahabad.

NOLAN, JAMES JOSEPH; journalist; Editor of *Rangoon Times*, since 1915; *b.* Limerick, 7 May 1869. *Educ.*: Crescent Coll., Limerick; King's Coll., London. Asst. Editor, *Heath and Home*, 1897; Editor, 1906-12; late Editor of *The Citizen*; Editorial staff, *Black and White*, 1903-12; Asst. Editor of *Canada*, 1912-14. *Address*: The *Rangoon Times*, Rangoon.

NORMAN, BRIG.-GEN. CLAUDE LUMSDEN, D.S.O. (1917), M.V.O. (1908), A.D.C. (1918). Comdt. Cavalry School, Saugor, C. P. *b.* 19 Feb. 1876. *Educ.*: Marlborough and R. M. C., Sandhurst. m. Emlyn Margaret, d. of Sir Alfred Reynolds, of Agot Bury, Herts. First Commission, 1896. Entered Indian Army, 1897; Squadron Officer, Q.V.O. Corps of Guides, 1899; served on N. W. Frontier, 1897-98 and in Somaliland, 1903-04; Bt. Lt.-Col., 1915; Bt. Col., 1918. *Address*: Cavalry School, Saugor, C. P.

NORMAND, ALEXANDER ROBERT, M.A., B.Sc.; Prof. of Chemistry, Wilson Coll., Bombay. *b.* Edinburgh, 4 March 1880; *Educ.*: Royal H. S. and Univ., Edinburgh. *Address*: Wilson College, Bombay.

NORTON, EARDLEY, Bar.-at-Law (Lincoln's Inn). *b.* 19 Feb. 1852. *Educ.*: Rugby Sch.; Merton Coll., Oxford. Advocate of the High Courts of Bengal and Madras. *Address*: Temple Chambers, Calcutta.

NOYCE, FRANK, I.C.S. *b.* 4 June, 1878. *Educ.*: Salisbury School and St. Catherine's College, Cambridge. m. Enid, d. of W. M. Kirkus, of Liverpool. Entered I.C.S., 1902. Served in Madras. Under Sec. to Govt. of India, Revenue and Agricultural Dept., 1912-16. Sec.; Indian Cotton Committee, 1917-18; Controller of Cotton Cloth, 1918. *Publication*: *England, India and Afghanistan* (1902).

NUNDY, SIR MANINDRA CHANDRA, K.C.I.E.; *ex-Add. Mem. of Imp. Council. Address:* Calcutta.

OBaidULLA KHAN, NAWABZADA HAFIZ MOHAMAD BAHADUR, C.S.I.; Col.-in-Ch. Bhopal Victoria Imp. Ser. Lancers; Hon. Major British Army; *b.* 3 Nov. 1878; 2nd s. of the Begum, Ruler of Bhopal. *Educ.:* at home by private tutors; A.D.C. to Viceroy, 1906; Commission as Captain in H. M.'s Army, 1908; accompanied the Begum on pilgrimage to Mecca; takes keen interest in education; is Trustee of M.A.O. Coll., Aligarh *Address:* Jahan Numa Palace, Bhopal.

OLDFIELD, HON. JUSTICE FRANCIS DU PRE Puisne Judge, Madras H. C., since 1913; *b.* 30 June 1869; *Educ.:* Marlborough; Trinity Coll., Cambridge; Fellow, Madras Univ., 1916, Ent. I.C.S., 1890. *Address:* Rutland Gate, Madras.

OLDHAM, CHARLES EVELYN ARBUTHNOT WILLIAM, K.-I.H. (1st Cl.), C.S.I., I.C.S.; Comr., Patna Divn. and Mem. of Leg. Council Bihar and Orissa. *b.* 15 Sept. 1869. *Educ.:* Galway, Gram. Sch. by private tutors Balliol Coll., Oxford. Passed into the I.C.S., in 1888: Commr. of Excise, Commr. of a Division and Offg. Mem. of Board of Rev.; Mem. of Bengal Leg. Council, 1907 to 1912 and of Prov. Leg. Council, Bihar and Orissa, 1912-19. *Publications:* A Manual of Arboriculture for Bengal. *Address:* Commissioner's House, Bankipur.

ORCHHA, H. H. SARAMAD-I-RAJAH-I-BUNDEL KHAND, MAHARAJA MAHINDRA SAWAI, SIR PRATAP SINGH BAHADUR, G.C.I.E., K.C.I.E., G.C.S.I.; *b.* 1854; *S.* brother 1874. State has area of 2,080 sq. miles and population of over 300,000. *Address:* Tikamgarh, Bundelkhand.

PALANPUR, H. H. DIWAN TALEY MAHOMED KHAN, LOHANI ZUDDAT-UL-MULK-NAWAB OF, Hereditary title of Nawab and personal two additional guns, 1910. State has area of 1,750 sq. miles and population of over 200,000. *Address:* Palanpur.

PALMER, RT. REV. E. J.; *see* Bombay, Bishop of.

PALMER, VEN. JOSEPH JOHN BEAUCHAMP M.A.; Archdeacon of Kottayam, since 1907; Principal, Cambridge Nicholson Institution, Kottayam; *b.* 10 Feb. 1866. *Educ.:* Wells G. S. privately; St. John's Coll., Camb. Missionary, C.M.S., 1891; C.N.I., Kottayam; Surrogate, 1908. *Address:* Kottayam.

PANNA, H. H. MAHENDRA MAHARAJA YAVENDRA SINGH OF; *b.* 1893; *S.* cousin on his deposition, 1902; *m.* 1912, Kunvari Shri Manhar Kunvarba, *o. d.* of Maharajah of Bhavnagar State, has area of 2,492 sq. miles, and population of about 200,000. *Address:* Panna, Bundelkhand.

PARANJPYE, THE HON. MR. RAGHUNATH PURUSHOTTAM. Prin. and Prof. of Math., Fergusson Coll., Poona, since 1902; *b.* Murdi, 16 Feb. 1876; *Educ.:* Maratha H. S., Bombay; Fergusson Coll., Poona; St. John's Coll., Cambridge (Fell.); Paris and Gottingen; First in all Univ. exam. in India; went to England

as Govt., of India scholar; bracketed Senior Wrangler at Cambridge, 1899; has taken prominent part in all social, political, and educational movements in Bombay Pres.; Vice-Chancellor of new Indian Women's Univ.; Bombay Leg. Council, 1913-16; *Address:* Fergusson College, Poona.

PAREKH, THE HON. MR. GOKULDAS KAHANDAS. *b.* 24 Jan. 1847. *Educ.:* Bombay University. *m.* Parsanbai, daughter of Hargovandas Tribhovandas of Cambay. School Master. Deputy Inspector, Gujarati Schools, Pleader, High Court, Bombay. Member, Bombay Legislative Council, since 1897. Presided at Satara Provincial Congress. Instituted preliminary inquiries into land revenue collection 1899-1900, which resulted in special Government inquiry. *Address:* New Queen's Road, Bombay.

PARTAB BAHADUR SING, RAJA, TALUQDAR OF KILA PARTABGARH, C.I.E. Hon. Magistrate; Hon. Mem. of U. P. Leg. Council; *b.* 1866. *Address:* Kila Partabgarh, Oudh.

PARTABGARH, H. H. SIR RAGHUNATH SINGH BAHADUR, MAHARAWAT OF; K.C.I.E., *b.* 1857; *S.* 1890. State has area of 886 sq. miles and population of 62,704; salute of 15 guns. *Address:* Partabgarh, Rajputana.

PATIALA, H. H. SIR BHUPENDRA SINGH, MAHARAJA OF; G.C.I.E., F.R.G.S., F.R.Z.S., M.R.A.S., M.R.S.A.; *b.* Oct. 1891; *S.* father (Sir Rajindra Singh Bahadur, G.C.S.I.), 1900. *Educ.:* Aitchison Coll., Lahore. Patiala is premier State of Punjab, is 5,412 sq. miles in extent, and has population of 1,596,692. Chief receiving salute of 17 guns. *Address:* Patiala.

PATON, THE HON. MR. NIGEL FAIRHOLT, Hon. A. D. C. to the Governor of Bombay. Managing Partner, W. A. Graham & Co, Bombay. *b.* 6 November 1867. *m.* Innes Mabel (deceased). *d.* of Major-General Sir Charles Hadden. *Educ.:* Edinburgh Academy and Edinburgh University. Chairman, Bombay Chamber of Commerce, 1919. Trustee, of the Port of Bombay since 1915. Major, 15th Bombay Battalion I. D. F. *Address:* Claremont, Malabar Hill, Bombay.

PATTANI, SIR PRABHASHANKAR DALPATRAM, K.C.I.E., C.I.E.; Senior Administrator, Bhavnagar State, 1919. Mem. of Exec. Council of Gov. of Bombay, 1912-17; of Council of India, 1917-19; *b.* 1862. *Educ.:* Morvi; Rajkote; Bombay. *Address:* Anantwadi, Bhavnagar.

PAUL, KANAKARAYAN TIRUSELVAM, O. B. E. (1918) Nat. Gen. Sec., Y. M. C. A. of India, Burma and Ceylon. *b.* 24 March 1876. *Educ.:* Madras Christian College, *m.* Miss K. Narasinga Rao. *Address:* 5, Russell Street, Calcutta.

PEARS, STEUART EDMUND, C.I.E., I.C.S.; Pol. Ag. Khyber, N.-W. F. Prov., 1912-18; Vice-President, Prov. Recruiting Board and Ch. Recruiting Officer, N.W.F.P., since 1918. *b.* 1875. *Educ.:* Edinburgh Univ.; Trinity Hall, Cambridge. Ent. I.C.S., 1898. *Address:* Peshawar.

PEACOCKE, COL. THOMAS GEORGE, C.I.E., (1918). *b.* 9 June 1865. Director General, Remount Dept. *Address:* Simla.

PEASE, COLONEL HENRY THOMAS, C.I.E., V.D., A.V.S.; Hon. A.D.C. to C-in-C. India, Prin., Vet. Coll., Punjab, since 1912; Commdt, Punjab L. H. b. 20 July 1862. *Educ.*: St. Edmund's Coll. Old Hall Green, Ware. Insp.-Gen., Civ. Vet. Dept., Simla, 1907-12. *Address*: Veterinary College, Lahore.

PECHEY, WILLIAM PRIMROSE, General Traffic Manager, B. B. & C. I. Railway. b. 1 October 1869. *Educ.*: Repton. In business houses in London, 1887-96. Joined Grindlay & Co., Bombay, 1896. Assistant Secretary to the Agent, B. B. & C. I. Railway, 1898. Assistant to General Traffic Manager, 1900. Traffic Superintendent, 1909. Acting Agent, 1919. *Address*: Byculia Club, Bombay.

PERTAB SINGH, SIR; *see* Jodhpur, Regent of

PERINI, RT. REV. PAUL, S.J., D.D.; Bishop of Mangalore, since 1910; b. Brandola, Italy, Jan. 1867. *Educ.*: various College of Society of Jesus in Austria, England, and Belgium. Joined Society of Jesus, 1883; Rector and Prin. of St. Aloysius Coll., Mangalore, for six years; Fell., Univ. of Madras. *Address*: Bishop's House, Mangalore.

PETIT, SIR DINSHAW MANOCKJEE, 2nd Baronet; s. of late Framjee Dinshaw Petit, 2nd son of 1st Baronet; b. 7th June, 1873; s. his grandfather, Sir Dinshaw Manockjee, under special remainder, 1901, and changed his name from Jeejeebhoy Framji Petit to Dinshaw Manockjee Petit; Merchant and Cotton Mill Owner; J.P. for Bombay; a Delegate of Parsee Ch. Matrimonial Court of Bombay; Pres. of Association for Amelioration of Poor Zoroastrians in Persia, the Petit Charity Funds, Petit Institute, and Parsee Orphanage, and Chairman and Member of Managing Committees of the principal Parsee charitable institutions in Bombay; m. 1894, Dinbai, d. of Sir Jamsetjee Jeejeebhoy, 3rd Bart., and has issue. *Address*: Petit Hall, Malabar Hill, Bombay.

PETMAN, CHARLES EARLE BEVAN, C.I.E., Government Advocate, Punjab, since 1909, b. 9 September 1866. *Educ.*: Privately and at Trinity College, Cambridge. Advocate, Calcutta H. Court, 1892 and of Chief Court, Punjab, 1892. *Publications*: "Report on frauds and bribery in the Commissariat Department." "P. W. D. Contract Manual" (Revised Edition). *Address*: Lahore.

PETRIE, DAVID, C.I.E.; b. 1879. *Educ.*: Aberdeen Univ.; Ent. Ind. Police, 1900; Asst. Dir., C.I.D., Simla, 1911-12; Spec. duty with Home Dept., since 1915. *Address*: c/o King, King & Co., Bombay.

PHAYRE, LT.-GEN. SIR ARTHUR, K.C.B., C.B.; Div. Commr. (Secunderabad), India, since 1914; b. 23 Feb. 1856; s. of Gen. Sir Robert Phayre, G.C.B. *Educ.*: Cheltenham Coll.; Jesus Coll., Cambridge. Ent. Army, 1878; Ind. Army, 1881; Col., 1904; A.D.C. to Gov. of Bombay, 1885-90; A.A.G. India, 1904; served Afghan War, 1878-80; China, 1900; S. Africa, 1902; commanded Meerut Cav. Brig., 1904-07; Sialkot Brig., 1908-11. *Address*: Ootacamund.

PIGGOTT, HON. MR. JUSTICE THEODORE CARO, B.A., I.C.S.; Puisne Judge, Allahabad, since 1914; b. Padua, 26 Oct. 1867. *Educ.*: Kingswood Sch. Bath; Christ Church, Oxford. Ent. I.C.S., Jud. Commsr. of Oudh, 1911. *Address*: High Court, Allahabad.

PIGOTT, LT.-COL. ROBERT EDWARD PEMBERTON, C.I.E., V.D., M.I.E.E.; Ch. Elec. Eng., B.B. & C. I. Ry., since 1908; Lt.-Col. Commdg. B. B. & C. I. Ry. Bn., I.D.F., b. 6 Oct. 1866; *Educ.*: Trent Coll., Nottingham. Hon. A.D.C. to C-in-C. in India. *Address*: Bombay.

PILKINGTON, HARRY SEYMOUR HOYLE, C.I.E., M.V.O.; Postmaster-General, Nagpur; b. 1869. Ent. Ind. P.O., 1890; Asst. Dir.-Gen., 1909-16; served with F. P. O. in China Exp., 1900-02; took charge of postal arrangements during visits to India of Prince and Princess of Wales, 1905-06; Ameer of Afghanistan, 1906-07; and King George and Queen Mary, 1911-1912; Dir., Postal Services with Indian Forces in France, 1914. *Address*: Nagpur.

PLINSTON, GEORGE CARTER, Journalist b. 31 May 1860. m. Fanny, daughter of the late J. T. Wright, J. P., Lincoln. *Educ.*: Warrington. After brief service in the Army took up journalism, becoming editor of *The Northern Daily Mail*, 1885. Came to India in 1887 on the staff of *The Bombay Gazette*; editor, 1900. After the demise of *The Bombay Gazette* in 1914, became Hon. Sec. and subsequently Secretary of the Yacht Club. Chairman of the Empire of India Life Assurance Company. *Address*: R. Bombay Yacht Club.

PLOWDEN, CECIL WARD CHICHELEY, C.I.E.; Insp.-Gen. of Police, Bengal; b. 18 Oct. 1864; Joined Bengal Police, 1884. *Address*: Calcutta.

PO SA, MAUNG, I.S.O.; b. Toungoo, 13 May 1862. *Educ.*: St. Paul's R.C.M. Sch., Toungoo. Senior Member, Burma Prov. Jud. Ser. since 1911; Interpreter to Prince of Wales, during visit to Burma, Jan. 1906. *Address*: Rangoon.

PRASAD, THE HON. MR. JUSTICE JWALA, Puisne Judge, Patna High Court, since 1916. b. 1875. *Educ.*: Patna College, Calcutta University, Muir Central College and Allahabad University; Vakil, Calcutta and Allahabad High Courts. Fellow of Patna University. *Address*: Patna.

PRATT, EDWARD MILLARD; Judge, High Court, Bombay, 1918; b. 29 August 1865; *Educ.*: Dulwich Coll. and Univ. Coll., London. Appointed I. C. S., 1886; Dist. and Sess. Judge, 1897; Leg. Rem., 1905; Jud. Commsr. of Sind, 1910. *Address*: High Court, Bombay.

PRATT, FREDERICK, I.C.S.; Commissioner, Northern Division, Bombay Presidency. b. 4 Dec. 1869. *Educ.*: Dulwich Coll.; Hertford Coll., Oxford. *Address*: Shahabagh, Ahmedabad.

PRASAD, GANESH, B.A., (Cantab.), M.A., D.Sc.; Sir Rashbehary Ghose, Prof. of App. Math. at Calcutta University; b. 15 Nov. 1876. *Educ.*: Ballia; Allahabad; Cambridge

- Gottingen. Member of Court, Hindu Univ. 1916. *Address*: 92, Upper Circular Road, Calcutta.
- PRATAB SINGH, Sir**; *see* Jodhpur, Regent of.
- PRICE, VENERABLE CYRIL, M.A.**: Archdeacon of Nagpur, since 1910. *Educ.*: King Edwards' Sch., Birmingham; Worcester Coll., Oxford. Priest, 1891; Senior Chaplain, 1910. *Address*: Jubbulpore.
- PUDUKOTA, H. H. RAJA MARTAND BHAIRAVA TONDIMAN BAHADUR, RAJA OF, G.C.I.E., b. 1875**; S. grandfather, 1886. State has area of 1,380 sq. miles, and population of 380,582, and has been ruled by Tondiman dynasty from time immemorial. Salute, 11 guns. *Address*: Pudukota.
- PUDUMJEE, NOWROJEE**, 1st Class Sardar of Deccan, Bombay; C.I.E.; b. 1841; *Educ.*: Poona Coll. under Sir Edwin Arnold, war mem. of Bombay Leg. Council; Promoter and Chairman of several Industrial and Banking Companies. *Address*: Pudumjee House, Poona.
- PURSHOTAMDAS THAKURDAS, C.I.E. (1919)**, O.B.E.; Addl. Mem. Leg. Council (1916); Cotton Merchant; b. 30 May 1879; *Educ.*: Elph. Coll., Bombay. Trustee of Port of Bombay; Chairman, Ind. Merchants' Chamber and Bureau; Chairman, Bombay Cotton Exch.; Chairman, Bombay Stock Exch. *Address*: Malabar Castle, The Ridge, Bombay.
- PURVES, ROBERT EGERTON, C.I.E.**; P. W. D. retired; b. 1859; *Educ.*: Thomason Coll., Roorkee; Ex. Eng., 1895; Supdt. Eng., 1907; Ch. Eng. and Sec. to Govt., Punjab Irrigation Branch, 1913-14; retired, 1914; since practising as Hydraulic Eng. and Irrigation Expert. *Address*: Lahore.
- QUILON, BISHOP OF**; *see* Benziger, Rt. Rev. A.M.
- RADHANPUR, H. H. MAHOMED JALALUDHINKHAN BABI, BAHADUR, NAWAB OF**; b. 1 April 1839; Pathan, Babi, Mahomedan. *Educ.*: Rajkumar Coll., Rajkot. S. brother, 1910; State has area of 1,150 sq. miles, and population of 65,567; salute 11 guns. *Address*: Radhanpur.
- RAGHAVA RAU, G. PANTULU**; Mem. of Madras Leg. Council and Vakil of Madras High Court; b. 1862. *Educ.*: Presidency Coll., Madras. *Address*: Anandabag, Vepery, Madras.
- RAGHUNATHDAS RAI BAHADUR, DIWAN BAHADUR CHAUBE, C.S.I.**; b. Nov. 1849; *Educ.*: Humes H. S., Etawah; Govt. Coll., Agra. Entered Native State Service in Rajputana; was Mem. of State Council, Kotah; Diwan, Kotah State, since 1896. *Address*: Kotah.
- RAGHUNATH RAO DINKAR, RAO RAJA-MASHIR-I-KHAS BAHADUR, MADAR-UL-MOHAM, C.I.E.**; Pol. Sec. to Maharaja Scindia; is a member of His Highness' Majlis-i-Khas, ranks as first class Sardar in Bombay; b. 4 Aug. 1858; *Educ.*: privately; Priv. Sec. to late Maharaja, and was Add. Acct.-Genl. *Address*: Gwalior.
- RAHIM, THE HON. SIR ABDUR, Kt. (1919)**: Judge, Madras High Court since 1908. b. September, 1867. m. Nisar Fatima Begum, d. of the late Moulvi Mahomed Yehia Saheb of Patna. *Educ.*: Government High School, Midnapore; Presidency College, Calcutta. Called to the Bar (Middle Temple) 1890; practised as Advocate, Calcutta; Presidency Magistrate, Calcutta, 1900-03; Fellow, Madras University, since 1908; Member of the R. Commission on Public Services, 1913-15; officiated as Chief Justice, Madras, July-October 1916. *Publication*: "Principles of Mahomedan Jurisprudence." *Address*: College Bridge House, Egmore, Madras.
- RAHIMTOOLA, SIR IBRAHIM, Kt., C.I.E.**; Mem., Ex-c. Council, Bombay; was Mem. of Imp., Council Mem., Bombay Leg. Council; b. May 1862. *Address*: Pedder Road, Cumballa Hill, Bombay.
- RAHIMTULLA CURRIMBOY EBRAHIM, B.A., (1908)**. Merchant and Mill-owner; b. 27 May 1887; *Educ.*: Elphinstone Coll., Bombay. Pres. of Bombay Mun. Corp'n. (1918-19). *Address*: 137, Esplanade Road; "Belvedere" Warden Road, Bombay.
- RAJARATHNA MUDALIYAR, PAKAM, C.I.E., Diwan Bahadur**; served in Salt Dept. since 1860; Insp.-Gen., Registration, 1896; Mem. of Madras Council, 1896-1902. *Address*: Madras.
- RAJKOT, THAKUR SAHEB LAKHAJI BOWAJI**; b. 17 Dec. 1885. *Educ.*: Rajkumar Coll., Rajkot. State has area of 282 sq. miles, and population of 49,938; salute of 9 guns. *Address*: Rajkot.
- RAMPAL, RAJA**; *see* Kutlehr.
- RAMPUR, COL. H. H. ALIJA, FARZAND-I-DILFIZIR-I-DAULAT-I-INGLISHIA, MUKHLIS-UD-DAULAH, NASIR-UL-MULK, AMIR-UL-UMARA, NAWAB SIR SAYED MOHAMMAD HAMID ALI KHAN BAHADUR, MUSTAID JUNG, G.C.I.E., F.C.V.O.; A.D.C., to King-Emperor**; b. 31 Aug. 1875; S. 1889. State has area of 892 sq. miles and population of 531,712; salute of 13 guns. *Address*: Rampur State.
- RANGOON, BISHOP OF**, since 1910; Rt. Rev. ROLLESTONE STERRITT FYFFE, D.D.; *Educ.*: Clifton Coll.; Emanuel Coll., Cam.; Ordained, 1894; S.P.G. Missionary, Mandalay, 1904-10; *Address*: Bishop's Court, Rangoon.
- RANJITSINHJI**; *see* Nawanagar.
- RANKIN, GEORGE CLAUS**. Judge, High Court, Calcutta. b. 12 August 1877. m. Alice Maud Amy Sayer. *Educ.*: Trinity College, Cambridge. Barrister (Lincoln's Inn) 1904. Practised on Northern Circuit. R. Garrison Artillery 1916-18. *Address*: High Court, Calcutta.
- RAO, RAO SAHIB S. M. RAJA RAM, Editor, The Wednesday Review**. b. 24 December 1876. *Educ.*: S. P. G. and St. Joseph's College, Trichinopoly. Stated *The Wednesday Review* in 1905 and *The Zamindar and Progress* (monthly) in 1919. *Address*: Trichinopoly.

- RAWLINSON, HUGH GEORGE**; Principal, Karnatak Coll., Dharwar; *b.* 12 May 1880; *Educ.*: Market, Bosworth Gram. Sch. and Emmanuel Coll., Cambridge; Lecturer in English and Classics, Royal Coll., Colombo, 1902-07; Ent. I.E.S. as Professor of English Literature, Deccan Coll., Poona, 1908 and 1915; Act. Prin., Gujarat Coll., Ahmedabad, 1914; Apptd. to Karnatak Coll., Dharwar, 1917. *Publications*: *Bactria*; *The History of a Forgotten Empire*; *Indian Historical Studies*; *Shivaji the Maratha*; *Intercourse between India and the West*. *Address*: Dharwar.
- RAY, MAHENDRANATH, C.I.E., M.A., B.L.**; Vakil, Calcutta High Court; *ex-Mem.*, Bengal Council; *b.* Oct. 1862. *Educ.*: Presidency Coll., Calcutta. *Mem.* of Syndicate, Calcutta Univ., since 1910. *Address*: 8, Khoroo Road, Howrah, and 2, Boloram Bose's 1st Lane, Bhawanipur, Calcutta.
- RAY, PROFULLA CHANDRA, C.I.E., D.Sc.** (Edin.); Ph. D. (Cal.); Sen. Prof. of Chemistry, Univ. Coll. of Sc., Calcutta; *b.* Bengal, 1861. *Educ.*: Calcutta; Edinburgh Univ. Graduated at Edinburgh. D.Sc.; Hon. Ph.D., Calcutta Univ., 1908; Hon. D.Sc., Durham Univ., 1912. Dean of Fac. of Sc. Univ. of Calcutta, 1915. *Address*: College of Science, Calcutta.
- READYMONEY, SIR JEHANGHIER COWASJEE JEHANGHIER**; *see* Jehanghier.
- REED, SIR STANLEY, KT., K.B.E., LL.D.** (Glasgow); Editor, *The Times of India*, Bombay, since 1907; *b.* Bristol, 1872; *m.* 1901, Lillian, *d.* of John Humphrey of Bombay. Joined staff, *Times of India*, 1897; Sp. Correspondt., *Times of India* and *Daily Chronicle* through famine districts of India, 1900; tour of Prince and Princess of Wales in India, 1905-06; Amir's visit to India, 1907, and Persian Gulf, 1907; Jt. Hon. Sec., Bombay Pres., King Edward and Lord Hardinge Memorials; Lt.-Col. Commandg. Bombay L. H. represented Western India at Imp. Press Confc., 1909. *Address*: *The Times of India*, Bombay.
- REID, WILLIAM JAMES, C.S.I.**; Commsr., Surma Valley, Assam, and Mem., Imp. Leg. Council, since 1914; *b.* 1871. *Educ.*: Glasgow H. S.; Emmanuel Coll., Cambridge; Ent. I.C.S., 1891. *Address*: Silchar, Assam.
- RICE, WALTER FRANCIS, C.S.I.**; Ch. Sec., Burma, since 1907; Mem. of Lt.-Gov.'s Council, since 1909; Add. Mem. of Imp. Council; *Educ.*: Morrison's Acad., Crief; Balliol Coll., Oxford. Ent. I.C.S.; 1890; Sec. to Govt., 1905. *Address*: Secretariat, Rangoon.
- RIVINGTON, REV. CECIL STANSFELD**; Mission Priest in Diocese of Bombay; Supdt. of S.P.G. Missions in Canarese-speaking district of Bombay Diocese; Hon. Canon of St. Thomas Cathedral, Bombay; *b.* London, 1853. *Educ.*: Rugby; Priest, 1879. *Address*: Betgeri-Gadag, Dharwar District, Bombay.
- ROBERTS, LT.-COL. SIR JAMES REID, KT., C.I.E., M.B., M.S., F.R.C.S. (Eng.) I.M.S.**; *b.* 24 Jan. 1861. *Educ.*: Dollar; Lausanne; Middlesex Hosp., London; Durham Coll. of Med. Ent. I.M.S., 1888. Surgeon to Lord Hardinge; Civil Surgeon, Simla W. *Address*: Simla.
- ROBERTSON, SIR BENJAMIN, K.C.S.I., K.C.M.G., C.S.I., C.I.E., Hon. LL.D. (Aberdeen)**; Ch. Commsr., C. P., 1912-20; *b.* 16 Oct. 1864. *Educ.*: Private Sch., Aberdeen Univ.; Balliol Coll., Oxford. Passed into I. C. S. 1883; Ch. Sec. to Ch. Commsr., C.P. 1902-06; Sec. Govt. of India, Commerce, Dept., 1907; Temp. Mem. of Imp. Council, 1910; Spl. duty in S. Africa, 1914, with Commission of Inquiry into Grievances of Indians within Union. *Address*: Nagpur.
- ROBERTSON, LAURENCE**; C.S.I.; Inspector. General Police, Bombay Presidency, 1919. *Educ.*: Glasgow Acad. and University; Ball. Coll., Oxford. Ent. I.C.S., 1892; Priv. Sec. to Gov. of Bombay, 1907-08; Sec. to Govt. of Bombay, 1908-11; Adm., Junagadh State, 1911-1913. Political Secretary, Bombay, 1913-18. *Address*: Poona.
- ROBINSON, SYDNEY MADDOCK**; Puisne Judge, Ch. Court of Lower Burma, since 1908; *b.* 3 Dec. 1865. *Educ.*: Hereford Cath. Sch.; Brasenose Coll., Oxford. Called to Bar Middle Temple, 1888; Govt. Adv. and Leg. Rem. to Punjab Govt. *Address*: 1, Leeds Road, Rangoon.
- ROBINSON, MAJ.-GEN. WILLIAM HENRY BANNER, C.B. (1915), K.H.S. (1919)**, Surgeon-General, Bengal since 1918. *b.* 7 December 1863. *Educ.*: High School, Dublin; Carmichael Medical School; and R.C.S.I. *m.* Elsie, *d.* of the late W.D. Butcher, M.R.C.S. Entered I.M.S. 1886. Served in Burma (1886); Chin Hills; Chitral; Waziristan Expedn.; and with Indian Exped. Force in Egypt. Dy. Dir. Med. Services, Egypt, 1914-17. Hon. Surgeon to the King. *Address*: U. S. Club, Calcutta.
- ROE, FRANCIS REGINALD**, Judge, Patna High Court, *b.* 5 Aug. 1869; *Educ.*: Winchester; New Coll., Oxford. Ent. I.C.S., 1888. Offg. Judge, Calcutta H. C., 1915. *Address*: Bankipore.
- ROGERS, LIEUT.-COL. SIR LEONARD, KT.**; C.I.E., F.R.S., M.D., B.S. (London), F.R.C.P., F.R.C.S., I. M. S.; Prof. of Pathology, Med. Coll. Calcutta; Pres. Asiatic Soc. of Bengal. Hon. Mem. of Cam. Phil. Soc. *b.* 1868. *Educ.*: Plymouth Coll.; St. Mary's Hos., London; Ent. I. M. S., 1893; Milroy Lecturer, R. C. P., 1907. Pres. Ind. Science Congress, Bombay, 1919. *Publications*: Numerous Scientific Papers in medical journals and Royal Soc. publications. *Address*: Calcutta.
- RONALDSHAY, EARL OF**; LAWRENCE JOHN LUMLEY DUNDAS, G.C.I.F., Gov. of Bengal, since 1916; *e. surr. s.* of 1st Marquess of Zetland; *b.* 11 June 1876; *m.* 1907. Cicely. 2nd *d.* of Col. Mervyn Archdale, late 12th Lancers; one s. three *d.* *Educ.*: Harrow; Trin. Coll., Camb.; Travelled Ceylon, 1898; India, 1899-1900; Persia, 1900-01; Asiatic Turkey, Persia, Central Asia, Siberia, 1903; Japan, China, Burma, 1906-07; A.D.C., Viceroy's Staff, India, 1900; M.P. (U.) Hornsey Division, Middlesex, 1907-16. *Address*: Govt. House, Calcutta.

- ROOS-KEPPEL, LT.-COL. SIR GEORGE, G.C.I.E., K.C.S.I., K.C.I.E., C.I.E., J.P. F.R.G.S.**; Member of the Council of India, 1919; Ch. Commsr. and Agent to Gov.-Gen., N.-W. F. Prov., 1908-19; Hon. Coll. Khyber Rifles, 1909; *b.* 7 Sep. 1866; joined Roy. Scots Fus., 1886; Capt., 1895; Brev. Maj., 1899; Bt. Lt.-Col., 1907; transferred to Indian Staff Corps, 1897; served Burmese Exp., 1885-89; Tirah Exp., 1897-98; commanded operations against Para Chamkannis, 1899; Bazar Valley F. F. 1908, as Ch. Pol. Officer, and in command of column; holds Swedish Military Order of Sword; employed in France, 1914, as extra King's Messenger; Pres., Ind. Branch League of Mercy; Knight of Grace, Order of St. John of Jerusalem, 1916; President, Provincial Centre, St. John Ambulance Association. *Address*: India Office, London.
- ROSE, FREDERICK CAMPBELL, C.S.I. (1920); M.I.C.E.,** Sec. to Govt. of India, P. W. D. *b.* 10 November 1865. *Educ.*: Glenalmond and Cooper's Hill. *m.* Lucy Hamer Mack. Entered P. W. D., 1886. *Address*: P. W. D., Simla.
- ROUSE, ALEXANDER MACDONALD, C.I.E.,** Supdt. Works, Delhi; *b.* 14 Sep. 1878; *Educ.*: St. Paul's Sch.; R.I.E.C. Cooper's Hill. *Address*: Delhi.
- ROW, DIWAN BAHADUR RAGUNNATHA ROW RAMACHANDRA,** Secretary to Government of Madras. *b.* 27 September 1871. *Educ.*: Trivandrum and Presidency College, Madras. Statutory Civil Service, 1890-92. Transferred to Provincial Service. Collector, Registrar, Co-op. Credit Societies. *Address*: Madras.
- ROY, RT. REV. AUGUSTIN;** Bishop of Coimbatore, since 1904; *b.* France, 1863. *Address*: Catholic Cathedral, Coimbatore.
- ROYAL-DAWSON, FREDERICK GEORGE, M.I.C.E., V.D.;** Chief Engineer with the Railway Board, January 1919. *b.* 1 June 1867. *m.* Rose, *d.* of the late Major Lynch. *Educ.*: Elizabeth College, Guernsey, and Cooper's Hill. Appointed Assistant Engineer, State Railways, 1889. Chief Engineer, N. W. Railway, 1917. Senr. Government Inspector of Railways, Lucknow, June, 1918. *Publications*: Technical papers including "Employment of Military Labour on the Agra-Delhi Chord" and "In-flow of water into wells in the Punjab." *Address*: Railway Board, Simla.
- RUNCHORELAL, SIR GIRIJAPRASAD CHINUBHAI MADHAVLAL,** 2nd Bt.; *b.* 19 Apr. 1906. *s.* of 1st Bt. and Sulochna, *d.* of Chunilal Khushalrai; *S.* father 1916. [Father was first member of Hindu community to receive baronetcy.] *Her.*: none. *Address*: Shahpur House, Ahmedabad.
- RUSSELL, CHARLES LENNOX SOMERVILLE;** *b.* 10 July 1872. *Educ.*: Rugby; St. John's Coll., Camb.; Ent. I. C. S., 1893; travelled through Baluchistan, Persia, and Central Asia, overland to Europe; *Sp.* duty in For. Dept. of Govt. of India, 1908-1909; Resident at Indore, 1909-1912, and again 1913-15; Resident, Baroda.
- RUTLAM, LT.-COL. H. H. SIR SAJJAN SINGHI, K.C.S.I. Raja Sahib Bahadur of Rutlam,** *b.* 13 Jan. 1880; *S.* father (Sir Ranjit Singhji, K.C.I.E.), 1893; *m.* 1902, *d.* of H. H. Rao of Kutch. State has area of 1,130 sq. miles and population of 82,497; salute of 11 guns; descended from younger branch of Jodhpur family, and maintains moral supremacy over Rajput chiefs in Malwa; served European War (France) 1915 and 1916. *Address*: Rutlam.
- SABNIS, RAO BAHADUR R. V., B.A., C.I.E.;** Diwan, Kolhapur State, since 1898; *b.* 1 April 1857; *Educ.*: Rajaram H. S., Kolhapur, Elphinstone Coll., Bombay. Ent. *Educ.* Dept.; held offices of Huzur Chitnis and Ch. Rev. Officer, Kolhapur; Mem. of Royal Soc. of Arts, East India Assoc.; Roy. Asiatic Soc. Bombay Br. *Address*: Kolhapur.
- SACHIN, NAWAB SEEDREE IBRAHIM MOHAMMED YAKUT KHAN-MUBARZARUT DAWLA NASRAT JUNG BAHADUR, NAWAB OF; A.D.C.;** *b.* 1886, and succeeded as an infant in following year. Installed May 1907; Hon. C. Captain, 1909. State has area of 49 sq. miles, and population of 60,000; salute of 9 guns. *Educ.*: Rajkumar Coll., Rajkote; Mayo Coll., Ajmere; Imp. Cadet Corps. Served G.E.A. in 1914-15. *Address*: Sachin, Surat.
- SAILANA, H. H. SIR JESWANT SINGHI BAHADUR, K.C.I.E., RAJA OF;** *b.* 1864; *s.* of Maharaj Bhawani Singhji, late Jagirdar of Semlia; adopted by H. H. Raja Duleh Singhji, S. 1895; *Educ.*: Daly Coll., Indore. State has area of 450 sq. miles, and population of 30,000; salute of 11 guns; Gave contribution of Rs. 50,000 to British war expenses and various charitable funds pertaining to war. *Address*: Sailana, Malwa.
- ST. JOHN, MAJOR HENRY BEAUCHAMP, C.I.E.;** Pol. Ag. and Dy. Commsr., Quetta, Peshin. *b.* 26 Aug. 1874. *Educ.*: Sandhurst. Ent. Army, 1893. *Address*: Quetta.
- SAMTHAR, H. H. MAHARAJA SIR BIR SINGH DEO, MAHARAJA OF, K.C.I.E.;** *b.* 8 Nov. 1865; *S.* 1896. *Address*: Samthar Bundelkhand.
- SANDERBROOK, JOHN ARTHUR;** Editor of *The Englishman*, Calcutta, since 1910; *b.* 3 May 1876. *Educ.*: Swansea G. S. Ent. Journalism, 1892; Ch. Asst. Editor, Western Mail, Cardiff, 1902-10; served in S. African War. *Address*: 9, Hare Street, Calcutta.
- SANDERSON, SIR LANCELOT, KT., K.C.;** Ch. Justice of Bengal, since 1915; *b.* 24 Oct. 1863. *Educ.*: Elstree; Harrow; Trin. Coll., Camb. Called to Bar. Inner Temple, 1886; M.P. (U.) Appleby Div., Westmorland, 1910-15; Recorder of Wigan, 1901-15. *Address*: 7, Middleton Street, Calcutta.
- SANJANA, SHAMS-UL-ULEMA Dastur Darab Peshotan,** Senior head priest of the Parsis. *b.* 18 November 1857. *m.* Shirinbai Rustomji B. Badshah. *Educ.*: Elphinstone High School, Proprietary School, and Elphinstone College, Hon. Fellow and Examiner in Avesta and Pahlavi, University of Bombay, 1887. Principal, Sir Jamsetji Zarhosti Madrasa. Editor and translator, "Pahlavi Dinkard."

- Has published many books on Parsi history and religion. *Address* : 85, Cumballa Hill, Bombay.
- SAO, SIR MOUNG, K.C.I.E., C.I.E., Sawbwa of Yawng Hwe, Burma; Mem. of Imp. Leg. Council. *Address* : Yawng Hwe, Shan States, Burma.
- SARDAR GHOUS BAKSH KHAN RAISANI, SIR, K.C.I.E., premier Chief of Sarawans, Baluchistan.
- SARVADHIKARY, DEVA PRASAD, C.I.E.; M.A., B.L., LL.D., (Aberdeen), LL.D. (St. Andrews), Surivatna (Navadwip) Vedyaratnakar; Vice-Chan., Calcutta Univ.; Mem. of Bengal Council; *Educ.* : Rameswarore; Sanskrit Coll., Presidency Coll., Calcutta. For several years Mem. of Mun. Corp. of Calcutta; Mem. of Imp. Lib. Comm.; Trustee, Imp. Museum; Pres., various literary societies; Mem., B. I. Assoc.; Vice-Pres., Calcutta Univ. Inst. *Address* : 20, Suri Lane, Calcutta.
- SASTRI, THE HON. MR. JUSTICE CALAMUR VEERAVALLI KUMARASAMI, Judge, Madras High Court, since 1914. *b.* July 1870. *Educ.* : Presy. and Law Colls., Madras. B.A. (1890), B. L. (1893). Vakil 1894. Judge, Small Causes Court, 1905-06. Judge, Madras City Court, 1906-12. District and Sessions Judge, Ganjam, 1912-14. Member of the Rowlatt Committee, 1918. *Address* : Kalamur House, Madras, N. E.
- SEAL, BRAJENDRANATH, M.D., Ph.D.; George V. Prof. of Mental and Moral Science, Calcutta Univ., since 1914; *b.* 3 Sep. 1864. *Educ.* : Gen. Asst. Coll.; (Ch. of Scotland) Calcutta Univ.; Del., Orientalist Congress, Rome, 1899; opened discussion at 1st Univ. Races Congress, London, 1911; Mem. Simla Committee for drawing up Calcutta Univ., Reg., 1905. *Address* : 25, Rammohun Shaw Lane, Duff Street, Calcutta.
- SEGRADA, RT. REV. EMANUELE; Vicar-Apostolic of Eastern Burma and titular Bishop of Hirina, since 1908; *b.* Lodi, 1860. *Address* : Karen Hills, Toungoo, Burma.
- SELL, REV. CANON E., B.D., (Lambeth), D.D., (Edin.); Fellow, Madras Univ.; Sec. Ch. M. Soc., Madras, since 1881; *b.* 1839; *Educ.* : C.M.S. Coll., London. Arr. in India, 1865; Numerous publications on the history of Islam. *Address* : Vepery, Madras.
- SEN, JITENDRANATH, M.A.; Calcutta Univ. Sen. Prof. of Phy. Sc., City Coll., since 1903 and of Chem., Nat. Med. Coll., Calcutta; *b.* 1875. *Educ.* : Hindu Sch.; Presidency Coll.; City Coll. and Sc. Assoc., Calcutta. *Address* : 25, Muddun Mohun Sen's Street, Calcutta.
- SEN, NARENDRA NATH, C.I.E. (1919). Dewan, Cooch Behar State. *b.* 15 June 1858. *Educ.* : Presidency College, Calcutta. Entered the service of Cooch Behar State as Sub-divisional Magistrate, 1884. Barrister-at-Law (Grey's Inn). *Address* : Dewan-Khana, Cooch Behar; and 80, Lower Circular Road, Calcutta.
- SETALVAD, RAO BAHADUR CHUNILAL HARILAL, C.I.E., Second Presidency Magistrate, Bombay. *Address* : Bombay.
- SETHNA, THE HON. MR. PHIROZE CURSETJEE, B.A., J.P., O.B.E., (1918); Member, Bombay Legislative Council. *b.* 8 Oct. 1866. Secretary, Sun Life Assurance Co. of Canada. *Address* : Canada Building, Hornby Road, Bombay.
- SHAFI, THE HON. MR. MIAN MUHAMMAD, Barrister and Advocate. *b.* 10 March, 1889. *Educ.* : Government College and Forman Christian College, Lahore. Barrister (Middle Temple). President, All India Muslim League, 1913. Trustee, M.A.O. College, Aligarh. Member, Punjab Legislative Council, and Imperial Legislative Council. *Address* : Lahore.
- SHAH, HON. MR. JUSTICE LALLUBHAI ASHARAM, M.A., LL.B.; Judge of High Court Bombay, since 1913; *b.* 1873; *Educ.* : Gujerat Coll., Ahmedabad; Govt. Law Sch., Bombay. *Address* : Malabar Hill, Bombay.
- SHAHPURA, RAJA SIR NAHAR SINGH DHIRAJ, K.C.I.E.; *b.* 7 Nov. 1855; S. Shahpura Gaddi by right of inheritance, 1870. *Address* : Shahpura, Rajputana.
- SHAKESPEAR, ALEXANDER BLAKE, C.I.E.; Merchant; partner in firm of Begg, Sutherland & Co.; *b.* 1873. *Educ.* : Berkhamstead. Was Sec., Upper India Chamber of Commerce, 1905-12. *Address* : Cawnpore.
- SHAMSHER SINGH, SIR SARDAR, SARDAR BAHADUR, K.C.I.E., C.I.E.; Ch. Min., Jind State; *b.* 1860. *Educ.* : Jullundur and Hoshiarpur H. S. and Govt. Coll., Lahore. Served during Afghan War, 1879-80, with march from Kabul to Kandahar; Ch. Jud. of State, High Court, 1899-1903. *Address* : Sangrur, Jind State.
- SHAMS-UL-HUDA, THE HON. MR. JUSTICE (NAWAB SIR SYED) K.C.I.E., M.A., B.L.; Judge, Calcutta High Court, since 1917; *b.* 1864; belongs to well-known family of Syeds in Tippera, East Bengal; *Educ.* : Presidency Coll., Calcutta; Calcutta Univ. Commenced practice as Vakil in High Court at Calcutta; Mem., Bengal Exec. Council, 1912-17; Vice-Pres., Bengal Exec. Council, April-June 1917; held office of Sec. of Bengal Prov. Moslem League and that of Bengal Landholders Assoc. Pres., All-India Moslem League, 1912. *Address* : 220-2, Lower Circular Road, Calcutta.
- SHARFUDDIN, HON. MR. JUSTICE SYED; ex. Judge of Patna High Court; Mem. of Exec. Council, Lt.-Gov. of Behar, since 1917; *b.* Neora, 10 Sept. 1856; *Educ.* : Patna Coll. Called to Bar. 1880; Puisne Judge, Calcutta, 1907-15; Mem. of Senate of Calcutta Univ., 1904; Bengal Council, 1905; Pres. of All India Md. Educ. Confce., 1906. *Address* : High Court, Patna.
- SHARP, HENRY, C.S.I., C.I.E., Kt. of Grace, Order of St. John of Jerusalem. M.A.; Educ. Commr. with Govt. of India in Educ. Dept. since 1915; Mem. Imp. Council; *b.* 1 June 1869; *Educ.* : Rugby; New Coll., Oxford, I.E.S. 1894, in C. P., Dir. of Pub. Inst., E. B. and Assam, 1906-10; *Publications* : "Rural schools in the C. P." "Progress of education in India, 1907-12, sixth quinquennial review." ditto, seventh quinquennial review, 1912-1917. *Address* : Simla and Delhi.

- SHASTRI, PRABHU DUTT, Ph.D. (Kiel), B. Sc. Litt. Hum. (Oxon.), M.A. B.T., Hon. M.O.L. (Punjab); I.E.S.; Sen. Prof. of Mental and Moral Phil. in Presidency Coll. Calcutta, since 1912; *b.* 20 June 1885; *Educ.*: Universities of Lahore, Oxford, Kiel, Bonn, and Paris. Del. to and Sectional Pres. at 4th Int. Congress of Philosophy held at Bologna, 1911; Head of Dept. of Philosophy, since 1912, Calcutta Univ. Lect. in Phil. and Sanskrit, 1912-15; invited to lecture in Universities of Geneva, Florence and Rome, 1913-14. *Publications*: several works and articles on philosophical, educational, literary, religious and social subjects. *Address*: Presidency College, Calcutta; Bellevue, Lahore.
- SIDGWICK, CHARLES KATER DURY D.S.O.; Dist. Loco. and Carr. and Wagon Supdt. B. B. & C. I. Ry.; *b.* 12 July 1873; *Educ.*: Rottingdean; Winchester. Served apprenticeship, L. and N. W. R. Co. at Crewe, 1892-95; served Boer War (D.S.O.); *Address*: B. B. & C. I. Railway, Bombay.
- SIKKIM, MAHARAJA OF, H. H. MAHARAJA TRASHI NAMGYAL; *b.* 26 Oct. 1893; *s.* of late Maharaja Sir Thotub Ramgyal, K.C.I.E., of Sikkim. *Educ.*: Mayo Coll., Ajmer; St. Paul's Sch., Darjeeling. *Address*: The Palace, Gangtok, Sikkim.
- SIMLA, ARCHBISHOP OF, since 1911, MOST REV. ANSELM, E. J. KENEALY; *b.* 1864. Ent. Franciscan Order, 1879; Priest, 1887; Guardian of Franciscans, Crawley, Sussex, 1899; Minister, Provincial for England, 1902; first Rector of the Franciscan College, Cowley, Oxford, 1906; elected life member of Oxford Union, 1907; Definitor-General representing English-speaking provinces; Visitation-General, Irish Province, 1910. *Address*: Archbishop's House, Simla.
- SIMONSEN, JOHN LIONEL, F.I.C.; D.Sc. (Manch.); Prof. of Chem. Presidency Coll., Madras; Dy. Controller, Ind. Mun. Board, *b.* 22 Jan. 1884; *Educ.*: Manchester G. S. and Univ.; Pres., Chem. Section Ind. Sc. Congress; 1917. *Address*: Simla and Delhi.
- SIMPSON, SIR CLEMENT BELL, KT.; Manager of Binny & Co., Madras; *b.* Madras, 25 July 1866; *Educ.*: Locker's Park; Rugby. Went to Binny & Co., Madras, 1886; partner, 1890; Mem., Madras Chamber of Commerce; sometime Trustee of Madras Port Trust; Director, Bank of Madras, and Director of local Cotton Manufacturing Companies. *Address*: c-o Binny & Co., Madras.
- SIMPSON, GEORGE CLARKE, F.R.S., D.Sc.; Controller, Indian Munitions Board; *b.* Derby; 1878. *Educ.*: Diocesan Sch., Derby; Owens Coll., Manchester; Gottingen. Scientific Asst., Meteorological Office, London, 1905; joined staff of Indian Meteorological Department, 1906; Physicist, British Antarctic Exp., 1910-12. *Address*: Munitions Board, Simla and Delhi.
- SINGH, LT.-COL. BAWA JIVAN, C.I.E. (1918), Inspector-General of Prisons, Bihar and Orissa, since 1912. *b.* 6 May 1863. *Educ.*: Government and Medical Colleges, Lahore and St. Thomas' Hospital Medical Schools, London. Joined I.M.S. 1891. Served in Military Department to 1896. Civil Surgeon, Meiktila 1896. I.G. of Prisons, E. Bengal and Assam 1909. *Address*: Patna, Bihar and Orissa.
- SINGH, KUNWAR MAHARAJ, C.I.E.; *b.* 17 May 1878. *Educ.*: Harrow; Ball. Coll. Oxford Bar-at-law, Middle Temple, 1902; Ent. Prov. C. S. U. P. as Dy. Coll. 1904; Sen. Asst. Sec. to Govt. of India, Dept. of Education, 1915. Mag. and Coll. of Hamirpur, U.P., 1917.
- SINGH, SIR RAMESHAR, G.C.I.E.; Maharaja Bahadur of Darbhanga; Mem. Exec. Council, Bihar and Orissa, since 1912; Mem. of Imp. Council, 1899-1900; *b.* 16 Jan. 1860; *S.* *b.* Maharaja Bahadur Sir Lakshmeshwar Singh, G.C.I.E.; *Educ.*: Queen's Coll. Benares, privately; Life-Pres., Behar Landholders Assoc. Maithei Mahasabha, Bharat Dharma Mahamandal, and also Pres. Hindu Univ. Soc., Behar Panchayat Assoc. etc.; *Address*: Darbhanga, and Ranchi.
- SINGH, LT.-COL. MAHARAJ, SIR SRI BHAIKUM BHADUR, K.C.S.I., C.S.I., A.D.C.; Vice-Pres. and Pol. Mem. of State Council; *b.* 1879; *s.* of Maharaj Sri Khet Singh, and *c.* of Maharajah of Bikaner. *Educ.*: Mayo Coll., Ajmer. *Address*: Bikaner.
- SINGH, PRINCE VICTOR D. *see* Duleep Singh.
- SINHA, NARENDRA PRASANNA; Major, I.M.S., retired; Consulting Physician; Mem., Advisory Council, India Office; *b.* 20 Sept. 1858. *Educ.*: Calcutta; Univ. Coll., London. Ent. I.M.S. 1886; retired 1905.
- SINHA, THE HON. MR. SACHCHIDANANDA, Barrister practising at Patna. *b.* 10 November, 1871. *m.* Srimati Radhika, *d.* of the late Mr. Siva Ram, of Lahore. *Educ.*: Patna College and City College, Calcutta. Called to the Bar (Middle Temple) 1893. Advocate, Calcutta High Court, 1893. Allahabad High Court, 1896. Founded and since edited *The Hindustan Review*, 1899. Member, Imperial Legislative Council. *Publication*: "The partition of Bengal or the separation of Behar." *Address*: Patna, Behar and 7, Elgin Road, Allahabad.
- SINHA, LORD SATYENDRA PRASSANA, 1ST BARON, P.C., K.C.; Under Sec. of State for India, 1919; raised to Peerage (1st Indian); *b.* 1864; *Educ.*: Birbhum Zilla Sch.; Presidency Coll. Calcutta; Lincoln's Inn; called to Bar, 1886; Barrister, Calcutta H. C.; Standing Counsel, Govt. of India, 1903; Adv. Gen. Bengal, 1907-1917; Representative of India in Imp. War Confee., 1917 and in 1918; Freeman of City of London, 1917; App. Representative of India at Peace Conference. *Address*: India Office, London.
- SIRMUR, HIS HIGHNESS RAJA AMAR PARKASH BHADUR, Chief of; K.C.S.I., *Address*: Sirmur, Nahan.
- SIROHI, H. H. MAHARAJA DHIRAJ, MAHARAO SIR KESRI SINGH BHADUR, K.C.S.I., G.C.I.E.; *b.* 20 June 1857; *S.* 1875; *Address*: Sirohi, Rajputana.
- SITAMAU, H. H. SIR RAJA RAM SINGH, RAJA OF, K.C.I.E.; *b.* 1880; descended from Rathor House of Kachi Baroda; *Educ.*: Daly Coll., Indore. Hindi and Sanskrit poet, and keen student of science and ancient and modern

philosophy. *S.* by selection by Govt. of India in default of direct issue, 1900. *Address:* Sitamau.

SLOCOCK, FRANCIS SAMUEL ALFRED, C.I.E., *Educ.:* Marlborough; Trinity Coll., Oxford. Ent. I.C.S., 1889; served Madras and C.P. Ch. Sec.-Ch. to Commr. 1903; Insp.-Genl. of Police, C.P. 1908-14 Sp. duty, Govt. of India, Home Dept., 1914-16. Ch. Sec. to Ch. Commr., C.P. and Addl. Mem., Imp. Leg. Council. *Address:* Nagpur.

SLY, SIR FRANK GEORGE, K.C.S.I.: Commr., Nagpur. *Educ.:* Balliol Coll., Oxford. Ent. I.C.S., 1885; Insp.-Gen. of Agric., 1904-05; Mem. of Roy. Commn. on Indian Services 1912. Mem. of Franchise Committee (Reforms Scheme) 1918-19.

SMITH, REV. GEORGE HERBERT, M.A. (Oxon); Prin. of S.P.G. Theological Coll., Madras; Sec. of Madras Diocesan Committee of S.P.G., since 1901; Hon. Canon of St. George's Cathedral, Madras, since 1910; Incumbent of St. Thomas' Church, San Thome, Madras; *b.* 31 Aug. 1851; *Educ.:* Richmond Sch., Yorks; Queen's Coll., Oxford. *Address:* Sullivan's Gardens, Royapettah, Madras.

SMITH, LT.-COL. JOHN MANNERS, V.C., C.I.E., C.V.O.: Pol. Dept., Govt. of India; Ch. Commr., Ajmer-Merwara; *b.* Lahore, 30 Aug. *Educ.:* Trin. Coll., Stratford-on-Avon; King Edward VI. Sch., Norwich, Sandhurst. Ent. Army, 1883; admitted Pol. Dept. 1887; accompanied Sir Mortimer Durand on Missions to Sikkim, 1888, and Kabul, 1893; held Pol. appointments in Kashmir, Bundhelkand, Baluchistan, Rajputana, and Nepal, 1889-1913; served in N.-W. F. Exp.; capture of Nilt Position (V.C.); *Address:* Ajmer.

SORABJI, CORNELIA; Legal Adviser to Purnadishins, Court of Wards, Bengal, Behar and Orissa, and Assam, and Consulting Counsel. *Educ.:* Somerville Coll., Oxford, Lee and Pembertons, Lincoln's Inn Fields, London; Bachelor of Civil Law, Examination Oxford, 1893; obtained special privileges, Lincoln's Inn, London, 1903; propounded in 1902 scheme, to India Office, for connecting Lady Counsel with Prov. Exec. Govts. of India; in 1904 app. by Govt. of Bengal to position she now holds. *Address:* Board of Revenue, Calcutta.

SPENCER, HON. MR. JUSTICE CHARLES GORDON, I.C.S.: Puisne Judge of Madras High Court, since 1914; *b.* 23 Feb. 1869. *Educ.:* Marlborough; Kettle Coll., Oxford; Lincoln's Inn. Ent. I.C.S., 1888; *Address:* Weston, Haddows Road, Nungumbaukum, Madras.

SPRING, HON. SIR FRANCIS JOSEPH EDWARD, K.C.I.E., C.I.E.: Mem., Madras Council, M.A.I., *honoris causa* and L.C.E. Trinity Coll., Dublin; late Mem. of Council of Inst. of Civil Engrs.; is Mem. of Inst. of Mech. Engrs.; and of American Soc. C.E.; Chairman and Ch. Eng. of Madras Port Trust; Consult. Eng. to Port of Chittagong; *b.* 20 Jan. 1849. *Educ.:* Middleton Sch. Co. Cork; Trinity Coll., Dublin. Ent. Ind. Govt. Eng. Service, 1870. *Publications:* has written on technical education on light

railways of local interest, and on the training and control of great rivers. *Address:* Madras.

STANDEN, BERTRAM PRIOR, C.I.E.: Commr., Bihar Div., C. P., since 1915; *b.* 1867; *Educ.:* Uppingham, Trinity Coll., Camb. Ent. I.C.S., 1886. Ch. Sec. to Ch. Commr. 1908-11; Mem., Prov. Leg. Council. *Address:* Amraoti.

STEIN, SIR AUREL, K.C.I.E., Ph.D., D.Litt. (Hon. Oxon.), B. Sc. (Hon. Camb.): Supdt., Indian Archaeological Survey on special duty; *b.* Budapest, 26 Nov. 1862; *Educ.:* Budapest and Dresden; studied Oriental Languages and Antiquities at Vienna and Tübingen Universities and in England. App. to I. E. S. as Prin. of Calcutta Madrasah, 1899; carried out archaeological explorations for Indian Govt. in Chinese Turkestan, 1900.—and in C. Asia and W. China, 1906-08; transferred to Archaeological Survey, 1909; carried out geographical and archaeological explorations in C. Asia and Persia, 1913-16. *Address:* Srinagar.

STEPHENSON, LT.-COL., JOHN, I.M.S., C.I.E.: 1919; Prin., Govt. Coll., Lahore, since 1912; *b.* Padham, Lancs, 1871; *Educ.:* Burnley G. S. Manchester Univ. B.Sc. (Lond.) 1890; M.B., Ch. B., (Manch.) 1893; M.B. (Lond.) 1894; F.R.C. (Eng.) 1905; D.Sc. (Lond.) 1909; F.R.S.E. 1912; joined I.M.S., 1895. *Address:* Lahore.

STEPHENSON, HUGH LANSDOWN, C.I.E., I.C.S.: *b.* London, 8 Apr. 1871. *Educ.:* Westminster; Christ Church, Oxford. Ent. I.C.S., 1895; Sec. to Board of Rev., Calcutta; Fin. Sec. to Govt. of Bengal; Addl. Sec., Pol Dept. *Address:* Writers' Buildings, Calcutta.

STEVENS, LT.-COL. CECIL ROBERT, I.M.S., M.D., B.S., Lond., F.R.C.S. Eng.: Prof. of Clinical and Operative Surgery, Medical Coll., Calcutta; *b.* 14 Mar. 1867. *Educ.:* Malvern; Univ. Coll., London; St. Bartholomew's. *Address:* 5, Middleton Street, Calcutta.

STEVENSON-MOORE, SIR CHARLES JAMES, K.C.I.E. (1920); C.V.O., I.C.S.: Mem. of Board of Rev., Bengal, since 1914; *b.* 1866; *Educ.:* Felsted Sch. Essex; Emmanuel Coll., Camb. Joined I.C.S., 1885; Ch. Sec., Govt. of Bengal, 1910; Mem., Prov. Leg., Council, since 1915.

STEWART, ALEXANDER CARMICHAEL, M.V.O., Dy. Insp.-Gen., Indian Police, since 1909. *Educ.:* privately. *Address:* Simla.

STEWART, SIR FRANCIS HUGH, Kt., C.I.E., M.A., (Oxon.):** partner in Gladstone, Wyllie and Company, Merchants, London and Calcutta; *b.* Nov. 1869. *Educ.:* Harrow; Magdalen Coll., Oxford. Amateur Golf Champion of India, 1897; Pres., Bengal Chamber of Commerce, 1915; Mem. of Bengal Council, 1911-12, 1914; Imp. Council, 1915; Sheriff of Calcutta, 1914. *Address:* 5, Council House Street, Calcutta.

STILL, CHARLES, C.I.F.: Indigo Planter; *b.* 1849. *Educ.:* privately. *Address:* Sathi Factory, Chumparun.

- STIRLING, GEORGE CLAUDIUS BERESFORD**, C.I.E.; Supdt. and Pol. Officer, S. Shan States, since 1910; *b.* 1861; Ent. Burma Pol. Dept., 1888. *Address*: Taunggyi, S. Shan States, Burma.
- STOKES, HOPETOUN GABRIEL**, C.I.E., B.A. Dy. Sec., Govt. of India, Fin. Dept., 1911-13; Fin. Mem., Imp. Delhi Committee, 1913-15; Priv. Sec. to Gov. of Madras, 1915. Pol. Ag. Banganapelle, Madras; *Educ.* Clifton; Oriel Coll., Oxford. Ent. I.C.S. 1895. *Address*: c-o Binny & Co., Madras.
- STONEY, EDWARD WALLER**, C.I.E., M.E., M.I.C.E.; M. Inst. C.E.; late Ch. Eng. of Madras Ry. (retired), 1904; Fellow, Madras Univ. *Address*: The Gables, Coonoor.
- STRANGMAN, SIR THOMAS JOSEPH, KT.** (1920): B.A., LL.B.; Adv. Genl., Bombay; *b.* 7 January 1873; *Educ.*: Charterhouse and Trinity Hall, Cambridge. Called to Bar at Middle Temple, 1896; admitted as Adv. of Bombay H.C. 1896; acted as Ch. Presy. Magte., Bombay, from June 1901 to May 1902; acted as Admr. Genl. and Official Trustee, Bombay, May 1902 to Nov. 1903; Adv. Genl., Bombay, Oct. 1906 to April 1915 and from Nov. 1916. *Address*: Malabar Hill, Bombay.
- STREET, LT.-COL. ASHTON, M.B.**, F.R.C.S.; Prin. and Prof. of Surgery, Grant Medical Coll.; Dean of Faculty of Medicine, Bombay Univ. *b.* 1864; *Educ.*: Downing Coll., Cam. *Address*: Grant Medical College, Bombay.
- STRINGFELLOW, HENRY PARKER**; Manager, Bank of India, Ltd., Bombay; *b.* 22 Sept. 1862; *Educ.*: Brighton G.S. London and County Bank, Lombard Street, London, 1882-1890; Alliance Bank of Simla, Ltd., 1890-1906; and Manager, Bank of India, Ltd., since 1906. *Publications*: Notes on Banking Practice in India. *Address*: Nepean Sea Road, Malabar Hill, Bombay.
- STUART, LOUIS, I.C.S.**; 1st Add. Jud. Commsr., Oudh, since 1914; *b.* 12 March 1870; *Educ.*: Charterhouse; Balliol Coll., Oxford. Ent. I.C.S., 1891; Jud. Sec. to Govt. and nom. as Mem. of U.P. Council, 1910-12. *Address*: Lucknow.
- STUART, MURRAY, D.Sc. (Birm.)**, B.Sc. (Lond.), F.G.S., F.C.S.; Geol. Sur. of India, since 1914; Prof. of Geol. in Poona Coll. of Engng., Bombay, in addition to other duties since June 1916; *b.* 5 Nov. 1882. *Educ.*: King Edward's H.S., Birmingham, and Birmingham Univ.; I.E.S., as Prof. of Geol., Presidency Coll., Madras, 1911-14. *Address*: Poona.
- STUART, MAJ.-GEN. SIR ROBERT CHARLES OCHILTREFF, K.C.S.I.**, C.S.I.; Mem. Ind. Munitions Board since 1917; *b.* 22 Aug. 1861. *Educ.*: Woolwich. Ent. R.A., 1880; I. O. D., 1889; Dir. Gen. of Ordnance, India, 1911-17. *Address*: Forest Hill, Simla.
- SUBRAMANIA IYER, SIR SUBBAYYER**, K.C.I.E.; retired Judge of Madras High Court; *b.* 1842. *Address*: Beach House, Mylapur, Madras.
- SUDBOROUGH, PROF. JOHN JOSEPH, Ph.D.**, D.Sc., F.I.C.; Prof. of Org. Chem., Ind. Inst. of Sc.; *b.* Birmingham, 1869. *Educ.*: King Edward's Sch. Camp Hill, Birmingham; Mason Coll., Birmingham; Univ. of Heidelberg; Owen's Coll., Manchester, D.Sc. London Late Prof. of Chem. and Dean of Fac. of Sci. Univ. Coll. of Wales, Aberystwyth. *Address*: Bangalore.
- SUKHIA, DR. NADIRSHAW H. E.**, L.M. & S. L.V. Sc. (Spl.); F.R.S.I. (Lond.). Mun. Councillor (1901); J.P. (1911); Hon. Pres. Magte. (1913); Del., the Parsi Chief Matrimonial Court (1916). Physician and Sanitarian *b.* 26 May 1860; *Educ.*: Bombay; Univ. Med. Examr., Bombay Univ. 1895; Lecturer in Anatomy and Physiology, Govt. Vet. Coll. Con. Vet. Surgn.; Assist. Surgn., Indian Medical Service; Med. Officer in charge of H. H. ex-King Theebaw of Burma and Suite and Ag. Civil Surgn., Ratnagiri; Mem. Standing Committee, Bombay Mun. Corp. (1911 to 1918); *Address*: Sukhia Building, Cowasji Patel Street, Bombay.
- SUNTH, MAHARANA SRI JORAWARSINGH GULABSINGHI, RAJA OF**; *b.* 24 March 1881; S. 1896; *Address*: Sunth, Kantha.
- SUTHERLAND, LIEUT.-COL. DAVID WATERS**, C.I.E., I.M.S.; Prin. and Prof. of Medicine, Med Coll., Lahore, and Dean, Med. Fac., Punjab Univ.; *b.* Australia, 18 Dec. 1871. *Educ.*: Melbourne and Edinburgh Univ. M.D. Edin. M.B., C.M. Edin. M.R.C.P., Lond., F.R.S., Edin., Fell.; Roy. Soc., Med., London. *Address*: Egerton Road, Lahore.
- SYED, SIR ALI IMAM, K.C.S.I.**, C.S.I., was Law Mem. of Viceroy's Council; *b.* 11 Feb. 1869. Called to Bar, Middle Temple, 1890. *Address*: Patna.
- TAGORE, ABANINDRA NATH, C.I.E.**; Vicer. Prin. Govt. Sch. of Art, Calcutta, since 1905, Zemindar of Shazadpur, Bengal; *b.* 1871. *Educ.*: Sanskrit Coll., Calcutta, and at home. Designed Memorial Address to Lady Curzon. Casket presented to King by Corp. of Calcutta, 1911; principal work consists in reviving School of Indian Art. *Address*: 5, Dwarkanath Tagore's Lane, Calcutta.
- TAGORE, MAHARAJA BAHADUR SIR PRODYOT COOMAR, KT.**; *b.* 17 September 1873. *Educ.*: Hindu Sch., Calcutta; afterward privately: Sheriff of Calcutta, 1909; Trustee, Victoria Mem. Hall; Trustee, Indian Museum; Mem. of Asiatic Soc. of Bengal; formerly Mem., Bengal Council. *Address*: Calcutta.
- TAGORE, SIR RABINDRANATH, KT.**, D.Lit. (Calcutta Univ.); *b.* 1861; *Educ.*: privately. Lived at Calcutta first; went to country at age of 24 to take charge of his father's estates; there he wrote many of his works; at age of 40 founded school at Shantiniketan, Bolpur; this has been his life-work ever since; visited England, 1912, and translated some of his Bengali works into English; Nobel Prize for Literature, 1913. *Publications*: In Bengali—about 30 poetical works, and 28 prose works, including novels, short stories, essays, sermons, dramas, etc. In English—Gitanjali, The Gardener, Suddhanü, The Crescent Moon, Chitra, The King of the Dark Chamber; The Post Office, a Play, 1914; Fruit-Gathering; Nationalism, 1917. *Address*: Shantiniketan, Bolpur.

TASADDUK RASUL KHAN, RAJA SIR
K.C.S.I.; Taluqdar of Jahangirabad, Mem.
of U.P. Council; Mem. B. I. Assoc., Oudh;
Address: Bara Banki.

TATA, SIR DORABJI JAMSETJI, KT., J.P.
sen. partner, Tata Sons & Co.; b. 27 Aug.
1859; s. of late Jamsetji Nusserwanji Tata, m.
1898, Meherbai, d. of H. J. Bhabha, Educ.:
Cainus Coll., Camb; Bombay Univ. Address:
Waudby Road, Bombay.

TAVEGGIA, RT., REV. SANTINO; Bishop of
Krishnagar, since 1906; b. Italy, 1855. Went
to India, 1879. Address: Krishnagar.

TAW SEIN KO, C.I.E., I.S.O., Supdt., Archæo-
logical Survey, Burma Circle; Exmr. in
Chinese, Burma, since 1906; b. 7 Dec. 1864;
Educ.: Christ's Coll., Camb; Burmese and Pali
Lecturer, Rangoon Coll., 1882-85; Asst. Sec.
to Govt. of Burma, 1885-92; Burmese
Lecturer, Cambridge, 1892-93. Address:
Mandalay.

TEGART, CHARLES AUGUSTUS, C.I.E., M.V.O.;
Indian Police; officiated as Dy. Insp.-Gen. of
Police, Calcutta, b. 1881; Educ.: Portora
Royal Sch., Enniskillen; Trinity Coll.,
Dublin. Joined Indian Police, 1901.

TEHRI, H. H. RAJA NARENDRA SHAH SAHAB
BAHADUR, of Tehri-Garhwal State; b. 3 Aug.
1898. Succeeded 1913. Educ.: Mayo Coll.,
Ajmere. Address: Tehri-Garhwal State.

THACKERSEY, SIR VITHALDAS DAMODHAR,
KT., J.P.; millowner; b. 1 Dec. 1873; Educ.:
Elphinstone Coll., Bombay; controls five of
largest cotton mills in Bombay; Mem. of
Bombay Council, 1903-10; Pres. of Bombay
Corp., 1907; Chairman of Millowners' Assoc.;
Pres. of Industrial Confee., Calcutta, 1906;
Dir. of many Joint-Stock Companies; Mem.
of Imp. Council; 1910-13. Address:
Mahaluxmi, Bombay.

THAKUR, RAO BAHADUR KASHNATH KESHAR,
I.S.O.; Sen. Div. and Sess. Judge, Nagpur,
since 1911; b. 15 Feb. 1860. Educ.: Sangor
and Jubbulpore H. S.; Muir Central Coll.,
Allahabad. Address: Nagpur.

THOMPSON, LT.-COL. CYRIL POWNEY, C.B.E.,
Commissioner, Multan Division. b. 21 Aug.
1864. m. Mary Alice Helen (M.B.E.), d.
of Lt. Gen. R. C. Clifford, C.B. Educ.:
Charterhouse and Sandhurst. Joined Wilts.
Regiment, 1885. 3rd Sikhs, P.F.F., 1888.
Punjab Commission, 1889. Address: Multan,
Punjab.

THOMPSON, HERBERT, C.S.I.; I.C.S., Burma;
b. 2 Oct. 1870. Educ.: St. Peter's Sch., York;
Trinity Coll., Cam.; App. I.C.S. 1889; has held
appointments as Ch. Sec. to Govt. of Burma,
and Fin. Commsr., Burma. Address: Ran-
goon.

THOMPSON, THE HON. MR. JOHN PERRONET,
C.S.I. (1919); Ch. Sec. to the Govt. of the
Punjab and Member of the Punjab Legislative
Council. b. 8 March 1873. m. Ada Lucia,
d. of the late R. Y. Tyrrell, Litt. D. Senr.
Fellow, Trinity Coll., Dublin. Educ.: Leeds
Gr. Sch. and Trin. Coll. Cambridge. 1st
Class Classical Tripos. President of the
Union (1895). Entered I.C.S., 1897. Revenue
Sec. to Punjab Govt., 1913. Ch. Sec. 1916.

Member of Indian Leg. Council, 1918. Mem-
ber of Reforms Committee, 1918-19. Address:
Lahore, or U. S. Club, Simla.

THORNTON, HUGH AYLMER, C.I.E., B.A.,
I.C.S.; Supdt. N. Shan States, since 1909.
Educ.: Cheltenham; Christ Church, Oxford
(B.A.). Ent. I.C.S., 1895. Address: The
Residency, Lashio, N. Shan States.

THULRAI, TALUQDAR OF, RANA SIR SHEORAJ
SINGH BAHADUR OF KHAJURGAON, K.C.I.E.;
Rai Bareilly District; b. 1865; m. 1st, d. of
Babu Amarjit Singh, y. b. of the Raja of
Mahonli; 2nd, d. of Raja Somesurdatt Singh,
a Raja of Kundwar; 3rd, d. of the Raja of
Bijapur District. Educ.: Govt. H. S., Rai
Bareilly. S. father, 1897; descended from
King Sahvahan, whose Sumvat Era is current
in India. Heir: Kunwar Lal Eima Natti
Singh Bahadur. Address: Thulrai, Khajur-
gaon.

TIGHE, MAJ.-GEN. SIR MICHAEL JOSEPH,
K.C.M.G. (1916); C.I.E. (1912); C.B. (1911);
D.S.O. (1889) G.O.C. 6th Division. b. 21
May, 1864. Educ.: Sandhurst. Joined
Leinster Regiment, 1883; Served in Burmese
War, Red Karen Exped., Chin-Lushai Exped.,
Chin Hills, E. Africa, (1895), Uganda,
Mekran, European war (E. Africa 1914-16).
Address: Poona.

TINNEVELLY, BISHOP OF, since 1915, RT.
REV. EDWARD HARRY MANSEFIELD WALLER,
M.A. (Cantab.); b. 8 Dec. 1871. Educ.:
Highgate Sch. Corpus Christi Coll.; Cam.,
Ordained 1894; Principal, St. Paul's Divinity
Sch., Allahabad, 1903; Sec., C.M.S., Indian
Group, 1913; Canon of Lucknow, 1910-15.
Address: Bishopstone, Palamcottah.

TODHUNTER, CHARLES GEORGE, C.S.I.
(1920). Member of Madras Governor's
Council. b. 16 Feb. 1869. Educ.: Aldenham
Sch. and King's Coll. Cambridge. Member's
prizeman, Cambridge University 1888, m.
Alice, d. of Captain C. Losack, 93rd High-
landers. Served in I.C.S. Madras; also
conducted special inquiries into Customs and
Excise matters in Kashmir, the C. P. and C. I.
States. Sec., India Excise Committee, 1906. I.G.
of Excise and Salt to the Govt. of India,
1909-12. President, Life Saving Appliance
Committee, 1913. Address: The Hermitage,
Mylapore, Madras.

TOLLINTON, HENRY PHILLIPS, C.I.E., I.C.S.;
Dy. Commr., Lahore, since 1909. Educ.:
Lamington Coll., Balliol Coll., Oxford. Ent.
I.C.S., 1893. Address: Lahore.

TOMKINS, HERBERT GERARD, C.I.E., F.R.A.S.;
Acct.-Gen., Bengal; b. 21 April 1869. Educ.:
privately. Joined Fin. Dept. of Govt. of
India, 1891. Address: 9, Riverside, Barrack-
pore.

TOMKINS, LIONEL LINTON, C.I.E.; Dy. Insp.-
Genl. of Police, Punjab, since 1914; Ent.
India Police Dept. in 1891; Address:
Lahore.

TONK, H. H. AMIN-UD-AULA WARIRUL MULK
NAWAB SIR MUHAMMAD IBRAHIM ALI KHAN
BAHADUR SAULAT JANG, G.C.I.E., G.C.S.I.;
b. 1848; S. 1867. State has area of 2553
sq. miles and population of over 270,000.
Address: Tonk.

TOTHILL, REAR-ADMIRAL SIR HUGH HENRY DARBY, K.C.M.G. (1918), C.B. (1916), Commander-in-Chief, East Indies, since August 1919. *b.* 1865. Served in Egyptian War, 1882, and the European War, including the Battle of Jutland in which he was a sub-divisional leader. Fourth Sea Lord, May, 1917-June 1919. *Address:* The Admiral's House, Bombay.

TRAVANCORE, H. H. SIR BALA RAMA VARMA, MAHARAJAH OF, G.C.I.E., G.C.S.I., M.R.A.S., Officer de l'Instruction Publique; *b.* 25 Sep. 1857; S. 1885. State has area of 6,730 sq. miles and population of 3,000,000. *Address:* Travancore.

TRAVANCORE AND COCHIN, SOUTH INDIA, BISHOP OF, since 1905, RT. REV. CHARLES HOPE GILL, M.A., D.D.; *b.* 11 Feb. 1861. *Educ.:* St. Edmund's Sch., Canterbury; King William's Coll., Isle of Man; Queen's Coll. and Ridley Hall, Cambridge. *Address:* Kottayam.

TROTTER, HON. JUSTICE VICTOR MURRAY COUTTS, M.A.; Puisne Judge of Madras High Court, since 1915; *b.* 12 May 1874; *Educ.:* St. Paul's Sch.; Balliol Coll., Oxford; called to Bar (Inner Temple), 1901; joined N. E. Circuit, 1902. *Address:* High Court, Madras.

TUDBALL, HON. JUSTICE WILLIAM; Puisne Judge, Allahabad High Court, since 1909; 15 Mar. 1866. *Educ.:* Bedford Mdg. Sch.; Christ Church, Oxford. I. C. S., 1885; Add. Jud. Commr., Oudh, 1908. *Address:* 27, Stanley Road, Allahabad.

TWEEDY, GEORGE ALFRED, I.C.S.; Mem. of Board of Rev. U.P., since 1911; Mem. of U.P. Council; *Educ.:* King's Coll., London. Ent. I.C.S., 1879; Commr. of a Division, 1903. *Address:* Allahabad.

TWOMEY, SIR DANIEL (HAROLD RYAN), I.C.S.; Judge, Chief Court, Rangoon, since 1909; *b.* 1861. *Educ.:* St. Stanislaus' Coll., Tullamore; Univ. Coll., London. Ent. I.C.S., 1882; called to Bar, Middle Temple, 1895; Sec. to Govt., 1897; Commissioner, 1905. *Address:* Rangoon.

TYABJI, HUSAIN BADRUDDIN, M.A. (Honours), LL.M. (Honours), Cantab. 1896; Bar-at-Law. Ag. Second Judge, Bombay Court of Small Causes; *b.* 11 October 1873; *m.* Miss Nazar Mohammad Fatehally. *Educ.:* Anjuman-e-Islam, Bombay; St. Xavier's School and College; Downing College, Cambridge. Practised in the Bombay High Court. *Address:* Almanzil, Malabar Hill, Bombay.

UDAIPUR, H. H. MAHARAJAH MAHARANA SIR FATEH SINGH, BAHADUR OF, G.C.S.I., G.C.I.E., *b.* 1848. *Address:* Udaipur.

UDAIPUR, H. H. THE RAJA OF, CHANDRASHEKAR PRASAD SINGH DEO, CHIEF OF. *Address:* Udaipur.

ULLAH, VEN. IHSAN; Archdeacon of Delhi; Archdeacon in Lahore Diocese, since 1910, and Supdtg. Missionary of Toba Tek Singh Mission; *b.* 1857; *Educ.:* Baring H. S., Batala; Lahore Div. Coll. *Address:* Holy Trinity Church, Lahore.

VAUGHAN, MAJ.-GEN. LOUIS RIDLEY, D.S.O. (1915); C.B. (1918); Officer of the Legion d'Honneur (1919); Commandant, Staff Coll., Quetta. *b.* 7 August 1875. *Educ.:* Uppingham and R. M. C., Sandhurst. *m.* Emilie, *d.* of J. P. Egan of St. Stephen's, Cork. Served with 25th Madras Infantry, 78th Moplah Rifles, 113th Infantry, 7th Gurkha Rifles, and on the Staff in France, 1914-19. Served in the Afghan War, 1919, in command of 4th War Division. *Address:* Staff College House, Quetta.

VEIRA DE CASTRO, RT. REV. TEOTONIO MANOEL RIBEIRO, D.D.; R. C. Bishop of Mylapur, since 1899; *b.* Oporto, 1859. *Educ.:* Gregorian Uni., Rome. *Address:* San Thome, Madras.

VENIS, ARTHUR, C.I.E., M.A., D.Litt.; *Educ.:* Edinburgh Univ.; Balliol Coll., Oxford; Fell. of Asiatic Soc. of Bengal and of Univ. of Allahabad. Ent. I. E. S., 1881; Prin. Sanskrit Coll., Benares, 1888; Queen's Coll., Benares, 1897; Prof. of Post-Vedic Sanskrit, Univ. of Allahabad, 1914. *Address:* Govt. Sanskrit Library, Benares.

VENKATASWERA CHALAPATI RUNGARAO BAHADUR, MAHARAJAH SIR RAVU, MAHARAJAH OF BOBBILI, G.C.I.E., K.C.I.E., Maharajah, 1900; Ancient Zemindar of Bobbili; *b.* 28 Aug. 1862. *Educ.:* Bobbili, privately. Ascended Gaddi in 1881; Vice-Pres. of Madras Landholders' Assocn.; Life Mem., Royal Asiatic Soc.; Mem. of Madras Council, 1896, 1898, 1900, and 1902; First Native Mem. of Madras Exec. Council, 1910-11. *Address:* Bobbili, Madras Presidency.

VERRIERES, ALBERT CLAUDE, C.I.E.; Supdtg. Eng., P.W.D., since 1916. *Educ.:* St. Peter's Coll., Agra; Roorkee. Ent. P.W.D. 1893; Under-Sec. to Govt. P.W.D., Naini Tal, 1912-14; Exec. Eng., Dehra Dun, 1915-16. *Address:* Fyzabad.

VIJAYARAGHAVA CHARYA, RAO BAHADUR, M.B.E. (1919); Diwan of Cochin. *b.* 27 August 1875. *Educ.:* Presidency College, Madras. Joined Provincial service, 1898; Revenue Officer, Madras Corpn., 1912-17. *Address:* Ernakulam.

VINCENT, SIR WILLIAM HENRY HOARE, KT.; Mem. of Viceroy's Exec. Council, 1917; *b.* 1866; *Educ.:* Christ Coll., Brecon; Trinity Coll., Dublin. Ent. I. C. S., 1887; served in Bengal in various capacities, off. as Judge, Calcutta High Court, 1909 and 1910; Sec. in Leg. Dept., Govt. of India, 1911-15; Mem. Exec. Council, Bihar and Orissa, 1915-17.

VINES, CAPTAIN DUNCAN FREDERICK, O.B.E. (1919), Captain R.I.M. *b.* 7 October 1868. *Educ.:* St. Lawrence Coll., Ramsgate. *m.* Constance, *d.* of H. W. Smithers, Esq. Appointed R.I.M., 1890. Commander, 1906. Captain, 1917. Five years Port Officer and Shipping Master, Calcutta. *Address:* R.I.M. Dockyard, Calcutta.

VISVESVARAYA, MOKSHAGUNDUM, SRM, K.C.I.E., B.A., L.C.E., M.I.C.E., late Dewan of Mysore; *b.* 15 Sept. 1861. *Educ.:* Central Coll., Bangalore, and Coll. of Science, Poona. Asst. Engineer, P.W.D. Bombay, 1884; Exec. Eng., 1899; Supdt. Eng., 1904; retired, 1908, Apptd. Sp. Consulting Eng. to Nizam's Govt.

- 1909; Ch. Eng. and Sec., P.W. and R. Depts., Govt. of Mysore, 1909; App. Dewan of Mysore, Nov. 1912. *Address*: Bangalore.
- VOLKERS, ROBERT CHARLES FRANCIS, C.I.E.**; Sec. Railway Board, 1907-13; Accountant, P. W. D., since 1878; Examiner, 1894. *Address*: Calcutta.
- WACHA, SIR DINSHA EDULJI, Kt.**; *b.* 2 Aug. 1844; *Educ.*: Elphinstone Coll., Bombay. In Cotton Industry, since 1874; for 31 years served Bombay Mun. Corp., (President, 1901-02); for 28 years Mem. Bombay Mill-owners' Assoc. Committee, since 1889, and Bombay Imp. Trust since its formation in 1898; Pres. of 17th National Congress, Calcutta, 1901; and of Belgaum Prov. Conference, 1897; gave evidence before Royal Commission on Indian expenditure in 1897; Trustee of Elphinstone Coll.; also Chairman, Indian Merchants' Chamber and Bureau. *Publications*: pamphlets on Indian Finance and Economics, Agricultural Condition of India, Railways, Currency, Temperance, etc.; large contributor to leading Indian newspapers and journals for the last 35 years. *Address*: Jiji House, Ravelin Street, Fort, Bombay.
- WADDINGTON, CHARLES WILLOUGHBY, M.A., C.I.E., M.V.O., I.E.S.**; Tutor to H. H. the Maharajah of Jodhpur; Prin., Mayo Coll., Ajmer, 1903-18; *b.* 29 Dec. 1865. *Educ.*: Charterhouse; Oriel Coll., Oxon. *Address*: Mayo Coll., Ajmer.
- WADIA, C. N., C.I.E. (1919)**; Millowner. *b.* 1869. *Educ.*: King's Coll., London. Joined his father's firm, 1888. *Address*: Pedder house, Cumballa Hill, Bombay.
- WADIA, JAMSETJEE ARDASEER, J. P.**, 1900; Merchant; *b.* 31 Oct. 1857; *Educ.*: Elphinstone Sch. and Coll. and served apprenticeship in Dickinson Akroid & Co. of London; Promoter and Director of Cotton and other industrial concerns: Member of Bombay Mun. Corp., since 1901. *Publications*: Writer on Industrial and Economic subjects: published two pamphlets against closing of the Mints. *Address*: Wilderness Road, Malabar Hill, Bombay.
- WADYA, SIR HORMASJI ARDESAR, Kt. (1918)**, Bar-at-Law, *b.* 2 January, 1849. *Educ.*: Elphinstone College, Bombay, and University College, London. M. Aimal, *d.* of the late Mr. Ardesar Hormasji of Lowji Castle, Parel. Called to the Bar, 1871. Personal Assisant to Mr. Dadabhai Naoroji, Dewan of Baroda, February 1874 to January 1875. Practised in Kathiawar since 1875. Trustee, Parsi Panchayat, 1912. Trustee of the late Mr. N. M. Wadia under his will. Recd. Kaiser-i-Hind Gold Medal, 1918. *Address*: 37, Marine Lines, Bombay.
- WALKER, MAJOR GEORGE KEMP, C.I.E.** Fell. of Royal Coll. of Vet. Surgs.; Major, I. C. V. D., Supdt. C. V. D., Bombay, *b.* 20 March 1872; *Educ.*: Warwick Sch.; R. V. C., London. Joined A. V. D., 1894; transferred to Cavalry, 1897. *Address*: Poona.
- WALKER, GILBERT THOMAS, M.A., C.S.I., F.R.A.S., Sc.D., F.R.S.**; Dir. Gen. of Indian Observatories, since 1904; *b.* 1868; *Educ.*: St. Paul's Sch.; Trinity Coll., Camb. (Senior Wrangler, 1889); Fell. 1891; Math. Lecturer, 1895. *Address*: Meteorological Office, Simla.
- WALKER, SIR JAMES, K.C.I.E., C.I.E.**, Commr., Nagpur; Add. Mem., Imp. Council, 1913; *b.* 1861. *Educ.*: Aberdeen Univ.; Balliol Coll., Oxford. Served in executive branch of I.C.S., in Madras and C.P. *Address*: Nagpur.
- WALLIS, SIR JOHN EDWARD POWER, HON. JUSTICE, Kt., M.A.**; Chief Justice, Madras, since 1914; *b.* Nov. 1861. Called to Bar, Middle Temple, 1886; Adv. Gen., Madras, 1900-07; Vice-Chancellor, Madras Univ., 1903; Puisne Judge, 1907-14. *Address*: High Court, Madras.
- WALMSLEY, HUGH, M.A., I.C.S.**; Judge, Calcutta High Court, since 1915; *Educ.*: Merton Coll., Oxford. Ent. I.C.S., 1893. *Address*: High Court, Calcutta.
- WALSH, ERNEST HERBERT COOPER, C.S.I., I.C.S.**; *b.* 7 March 1865. *Educ.*: Trent; Univ. Coll., London; Middle Temple; Commr., Burdwan Div., 1904; Bhagalpur Div., 1907; Mem., Imp. Council, 1912 and 1914; Commr., Chota Nagpur Div., 1912; Mem., Royal Asiatic Soc. and Asiatic Soc. of Bengal. *Address*: Ranchi.
- WANKANER CAPTAIN MAHARANA SRI, SIR AMARSINHI, RAJ SAHEB OF, K.C.I.E.**; *b.* 4 Jan. 1879; S. 1881; *Educ.*: Rajkumar Coll. State has area of 425 sq. miles, and population of 32,653. Salute, 9 guns. *Address*: Wankaner.
- WARBURTON, JOHN PAUL, C.I.E.**; *b.* 28 Aug. 1840. Joined Pol. Dept., Punjab, 1864; Asst. Insp. Gen., Railway Police, 1894; retired, 1900. *Address*: Gilbert House, Kasauli.
- WARD, ARTHUR WILLIAM, M.A.**; Prof. of Physics, Canning Coll., Lucknow, since 1889; *b.* Waterloo, 1 Aug. 1858. *Educ.*: Liverpool Coll.; Liverpool Inst.; St. John's Coll., Camb.; Fell. and Mem. of Syndic, Allahabad Univ. Mem. of Senate, Benares Hindu Univ., 1916. *Address*: Badshah Bagh, Lucknow.
- WARD, THOMAS ROBERT JOHN, C.I.E., M.V.O.**; *Educ.*: Framlingham Sch., Cooper's Hill. Ent. P. W. D., 1883; on dep. with Seistan Boundary Commission, 1902-06; Engineer, Delhi Durbar, 1911; Engineer to Home Dept., Govt. India, for selection of site for new capital, Delhi, 1912; services lent for 18 months to King of Siam to inaugurate irrigation works in Valley of Menam Chao Phaya; Ch. Eng. and Sec. to Punjab Govt., 1915; Mem., Punjab Council, 1915; F.R.G.S. M.I.C.E.; M.A.M.C.E. *Address*: Lahore.
- WARNE, RT. REV. FRANCIS WESLEY**; Missionary Bishop to India, since 1900; *b.* 30 Dec. 1854. *Address*: Inayat Bagh, Lucknow.
- WATHEN, GERAUD ANSTRUTHO, M.A.**; Prin. Khalsa Coll., Amritsar, since 1915; *b.* 28 Dec. 1878. *Educ.*: St. Paul's Sch.; Peterhouse, Camb.; Bonn; Paris. App. to I.E.S., 1905. Insp. of Chiefs' Colleges in India, 1909; Dean of Fac. of Arts, Punjab Univ., 1913-14. *Address*: Khalsa College, Amritsar.
- WATSON, CHARLES CUNNINGHAM, C.I.E.**; Commr., Ajmer-Merwara; *b.* 1874; *Educ.*: Edinburgh Univ.; Christ Church, Oxford,

- Ent. I.C.S., 1897; Priv. Sec., Gov. of Bombay, 1909-12; Sec. to Govt. of Bombay, Pol. and Jud. Dept., 1912-14. *Address*: Ajmer.
- WATSON, HUBERT DIGBY, C.I.E.** (1919); I.C.S. *b.* 31 December 1869. *Educ.*: Harrow; Balliol College, Oxford. *m.* Florence Dorothy Usborne. In the Punjab Commission. *Publication*: Hazara Gazetteer. *Address*: Jullundur.
- WATT, REV. JOHN, M.A., D.D., F.C.S.**; Prin., Scottish Churches Coll., Calcutta; *b.* 1862. *Educ.*: Parish Sch., Methlick; Gram. Sch., Old Aberdeen; Aberdeen Univ.; New Coll., Edinburgh. Joined Duff Coll., Calcutta, 1888. *Address*: 4, Cornwallis Square, Calcutta.
- WEBB, HON. M. DE P., C.I.E.**; Founder of The War League of India; Chairman, Karachi Chamber of Commerce; *b.* Clifton, 1869. *Educ.*: privately. Engaged in mercantile pursuits. *Address*: Karachi.
- WEBSTER, JOHN EDWARD, C.I.E., I.C.S.** Dy. Commsr., Sylhet, Assam, since 1912; *b.* Ranchi, 3 Sept. 1871. *Educ.*: Charterhouse; Trinity Hall, Cam.; Ent. I.C.S., 1891. *Address*: Sylhet.
- WESTCOTT, RT. REV. F.** See Calcutta, Bishop of.
- WESTCOTT, RT. REV. G. H.**; see Lucknow, Bishop of.
- WHEELER, SIR HENRY, K.C.I.E., C.I.E., C.S.I., I.C.S.**; Mem., Exec. Council, Bengal, since 1917. *Educ.*: Christ's Coll., Cam. Ent. I.C.S., 1891; Dy. Sec., Govt. of India, Fin. Dept., 1907-08; Sec., Royal Commission on Decentralisation, 1908-09; Fin. Sec., Govt. of Bengal, 1909-12; Home Sec., Govt. of India, 1912-16.
- WHEELER, THE REV. HUGH TREVOR, M.A.** (Dublin), Archdeacon of Lahore, 1919. *b.* 27 September 1874. *m.* Kathleen Gunning. *Educ.*: Trinity College, Dublin. Chaplain to the Forces, M.E.F., 1915. *Address*: Ch. Ch. Lodge, Simla.
- WHITE, MAJOR FREDERICK NORMAN, C.I.E., M.D.**; Asst. Dir.-Gen., I.M.S. (Sanitary), 1914; Sanitary Commsr., Govt. of India, Simla. *Address*: c-o Grindlay, Groom & Co., Bombay.
- WHITTY, JOHN TARTON, C.I.E.**; Manager, Bettiah Raj under Court of Wards. *Educ.*: Clifton Coll.; New Coll., Oxford; Univ. Coll., London. Ent. I.C.S., 1898; *Address*: Champaran.
- WILLIAMS, CAPT. HERBERT ARMSTRONG, D.S.O., I.M.S.**; Resident Medical Officer, Rangoon General Hospital, since 1907; *b.* 11 Feb. 1875. *Address*: General Hospital, Rangoon.
- WILLIAMS, SYDNEY CHARLES, M.A.** (Cantab.), B.A. (London). Vice-Chairman, Calcutta Port Commissioners. *b.* 9 May 1876; *Educ.*: Kingswood Sch.; Bath, Univ. Coll., Aberystwyth and Trinity Coll., Cambridge. Priv. Sec. to Sir Edward Holden 1900; Junior Sec. to Agent, E. I. Ry., 1900-03; Dy. Sec. to Agent, E. I. R., 1903-06; Secy. to Agent, E. I. R., 1906-14; Sec. Port Commissioners, Calcutta, 1914-16; Vice-Chairman, 1916. *Publications*: The Economics of Railway Transport, 1909; Article on Indian railways in Modern Railway Practice, 1913. *Address*: Port Commissioner's House, Calcutta.
- WILLINGDON, 1st Baron, of Ratton, cr.** 1910. FREEMAN FREEMAN-THOMAS; Governor of Madras, 1919. *b.* 12 Sep. 1866; *m.* 1892, Hon. Marie Adelaide, *d.* of 1st Baron Brassey; A.D.C. to Lord Brassey when Gov. of Victoria, 1895; M.P. (L.) Hastings, 1900-1906; Bodmin, Div. of Cornwall, 1906-10; Jun. Lord of Treasury, 1905-12; Lord-in-Waiting to H. M.; Governor of Bombay, 1912-18. *Heir*: Hon. Inigo Brassey Freeman-Thomas, *b.* 25 July 1899. *Address*: Government House, Madras.
- WILLIS, GEORGE HENRY, C.I.E., 1918; M.V.O.** Major, R.E., M.I. Mech. E., J.P.; Master of Mint, Bombay; *b.* 21 Oct. 1875; *Educ.*: St. Paul's Sch., London; R.M.A., Woolwich. R. E. 1895; Major, 1914. Arrived India, 1900; Deputy Mint Master, 1907; officiated as Mint Master till October 1915. Bombay representative of Indian Advisory Committee to Council of Institution of Mechanical Engineers. *Address*: H. M. Mint, Bombay.
- WILSON, CHARLES HENRY, C.I.E.**; Agent of Hong-Kong and Shanghai Banking Corporation, Bombay. *b.* 22 Oct. 1858. *Address*: Bombay.
- WILSON, CAPTAIN NEVILLE FREDERICK JARVIS, C.M.G., C.B.E., Director, R.I.M.**; *b.* 2nd Jan. 1865; *Educ.*: Gosport Military Academy. Merchant Service, 1878 to 1887; R.I.M. thence to date. *Address*: Marine House, Govt. Dockyard, Bombay.
- WINDHAM, LT.-COL. CHARLES JOSEPH, C.I.E.**; Resident in Western States of Rajputana, since 1910; *b.* 1867; Ent. Army, 1886; Indian Pol. Service, 1893; Pol. Officer with Ex-Amlir Yakub Khan of Kabul. *Address*: The Residency, Jodhpur.
- WINN, GILBERT FRANKLYN, I.S.O.**; Registrar, Home Dept., Govt. of India, since 1912; *b.* 1866. *Educ.*: Muir Central Coll., Allahabad. *Address*: Simla.
- WITHERS, LIEUT. EDGAR CLEMENT, C.I.E., R.I.M.**; Intelligence Officer, Persian Gulf. *Address*: Intelligence Department, Basra.
- WITTET, GEORGE, F.R.I.B.A., Director, Tata's Engineering Co. Ltd.** *b.* 26 November, 1878. Consulting Architect to the Govt. of Bombay, 1908-1919. *Address*: Byculla Club, Bombay.
- WODEHOUSE, LT.-COL. FREDERIC WILLIAM, C.I.E., I. A.**; Bombay Pol. Dept., Resident, Kolhapur and Pol. Agent, S. Mahratta Country States; *b.* 7 April 1867; *Educ.*: Westminster; Sandhurst. Joined Army, 1886; *Address*: The Residency, Kolhapur.
- WOOD, HON. SIR JOHN BARRY, K.C.I.E., C.S.I.**; Pol. Sec., Govt. of India, since 1914; late Resident, Indore; *b.* 1870. *Educ.*:

Marlborough; Balliol Coll., Oxford. Ent. I.C.S., 1893; Under-Sec. to Govt. of India, Foreign Dept., 1899-1903; 1st Assist. in Baluchistan, 1903. Dy. Sec., Foreign Dept., 1906-10. *Address*: Ava Lodge, Simla.

WOOD, WALTER GUNNELL, A.M.I.C.E., C.S.I.; Prin., Thomason C.E., Coll., Roorkee, since 1916; *b.* 19 Oct. 1861. *Educ.*: Wellington; R.I.E. Coll. Ent. P.W.D., 1882. Supdt. Eng., 1905: Ch. Eng. and Sec. to Govt., U. P., 1912-16. *Address*: Roorkee.

WOODROFFE, JUSTICE SIR JOHN GEORGE, Kt., Puisne Judge, Calcutta High Court, since 1904; *b.* 15 Dec. 1865. *Educ.*: Woburn Park; Univ. Coll., Oxford (B.C.L., M.A.). Barr., Inner Temple, 1889; Advocate, Calcutta H. C., 1890; Judge, 1904; Offg. Ch. Justice, Bengal, Nov. 1915. *Address*: 4 Carnac Street, Calcutta.

WOODYATT, MAJ.-GENERAL NIGEL GRESLEY, C.B. (1916), C.I.E. (1919). *b.* 30 March 1861, *m.* Florence Patterson, *e.d.* of A. B. Patterson, late I.C.S. *Educ.*: Shrewsbury. Entered Army, 1883. Served with Chitral Relief Force, 1895. G.O.C., Delhi, 1914-15. Conducted operations against the Bunerwals, August 1915. Commanded 3rd Infantry Bde, against the Mohmands, September and

October 1915. Acting G.O.C., 6th Division, 1919. *Address*: Poona.

WOOLACOTT, JOHN EVANS, correspondent of *The Pioneer* and of *The Times* at headquarters of the Govt. of India. *b.* 1862. *Educ.*: Milford Haven Sch., and Gr. Sch. Menaibridge. *m.* Anjoulina, *d.* of the late A. Seneca. On staff of *Central News*: Correspondent of *The Daily Mail* in Cairo and Paris. Assistant Editor, *The Economist*. City Ed. *The Tribune*: has edited *The Statesman* and *The Bombay Gazette*. President, Institute of Journalists, 1908. Parliamentary Candidate, Glasgow, 1895. *Address*: Simla or Delhi.

WYNDHAM, PERCY, C.I.E., R.G.S.: Commsr., Kumaon, since 1914; *b.* 13 Dec. 1867. *Educ.*: Giggleswick Sch.; Queen's Coll. Oxford, M.A., Joined I.C.S., 1889. *Address*: Naini Tal.

YULE, SIR DAVID, Kt. (1912), Partner, Messrs. Andrew Yule & Co. *b.* 4 Aug. 1858. *m.* Annie Henrietta Yule, *d.* of late Andrew Yule. *Educ.*: R. High School, Edinburgh. Joined firm of Andrew Yule & Co., Calcutta, 1875. *Address*: 8 Clive Row, Calcutta.

YUSUF, SIR HADJI MUHAMMEN, Kt. *Address*: Bombay.

For many years Indian time was in a state of chaotic confusion. What was called Madras or Railway time was kept on all the railways; and each great centre of population kept its own local time, which was not based on any common scientific principle and was divorced from the standards of all other countries. It was with a view to remedying this confusion that the Government of India took the matter up in 1904, and addressed to the Local Governments, and through them to all local bodies, a long letter which reviewed the situation and made suggestions for the future. The essential points in this letter are indicated below:

"In India we have already a standard time, which is very generally, though by no means universally, recognised. It is the Madras local time, which is kept on all railway and telegraph lines throughout India and which is 5h. 21m. 10s. in advance of Greenwich. Similarly, Rangoon local time is used upon the railways and telegraphs of Burma, and is 6h. 24m. 47s. ahead of Greenwich. But neither of these standards bears a simple and easily remembered relation to Greenwich time.

"The Government of India have several times been addressed by Scientific Societies, both in India and in England, and urged to fall into line with the rest of the civilised world. And now the Royal Society has once more returned to the attack. The Committee of that Society which advises the Government of India upon matters connected with its observatories, writes:—'The Committee think that a change from Madras time to that corresponding to a longitude exactly 5½ hours east of Greenwich would be an improvement upon the existing arrangements; but that for international scientific purposes the hourly zone system, making the time 5 hours in advance of Greenwich in the west, and 6 hours in advance in the east of India, would be preferable.'

"Now if India were connected with Europe by a continuous series of civilised nations with their continuous railway systems all of which had adopted the European hour-zone system, it would be imperative upon India to conform and to adopt the second suggestion. But as she is not, and as she is as much isolated by uncivilised States as Cape Colony is by the ocean, it is open to her to follow the example of that and some other similarly situated colonies and to adopt the first suggestion.

"It is believed that this will be the better solution. There are obvious objections to drawing an arbitrary line right across the richest and most populous portions of India, and so as to bisect all the main lines of communication, and keeping times differing by an hour on opposite sides of that line. India has become accustomed to a uniform standard in the Madras time of the railways; and the substitution for it of a double standard would appear to be a retrograde step; while it would, in all probability, be strongly opposed by the railway authorities. Moreover, it is very desirable that whatever system is adopted should be followed by all Europeans and Indians alike; and it is certain that the double standard would puzzle the latter greatly; while by emphasising the fact that railway differed from local time, it might postpone or even altogether prevent the acceptance of the former instead of the latter by people generally over a large part of India. The one great advantage which the second

possesses over the first alternative is, that under the former, the difference between local and standard time can never exceed half an hour, whereas under the latter it will even exceed an hour in the extreme cases of Karachi and Quetta. But this inconvenience is believed to be smaller than that of keeping two different times on the Indian system of railways and telegraphs.

"It is proposed, therefore, to put on all the railway and telegraph clocks in India by 8m. 50s. They would then represent a time 5½ hours faster than that of Greenwich, which would be known as **Indian Standard Time**, and the difference between standard and local time at the places mentioned below would be approximately as follows, the figures representing minutes, and F. and S. meaning that the standard time is in advance of or behind local time respectively:—Dibrugarh 51 S., Shillong 38 S., Calcutta 24 S., Allahabad 2 F., Madras 9 F., Lahore 33 F., Bombay 39 F., Peshawar 44 F., Karachi 62 F., Quetta 62 F.

"This standard time would be as much as 54 and 55 minutes behind local time at Mandalay and Rangoon, respectively; and since the railway system of Burma is not connected with that of India, and already keeps a time of its own, namely, Rangoon local time, it is not suggested that Indian Standard Time should be adopted in Burma. It is proposed, however, that instead of using Rangoon Standard Time as at present, which is 6h. 24m. 47s. in advance of Greenwich, a Burma Standard Time should be adopted on all the Burmese railways and telegraphs, which would be one hour in advance of Indian Standard Time, or 6½ hours ahead of Greenwich time, and would correspond with 97° 30' E. longitude. The change would bring Burma time into simple relation, both with European and with Indian time, and would (among other things) simplify telegraphic communication with other countries.

"Standard time will thus have been fixed for railways and telegraphs for the whole of the Indian Empire. Its general adoption for all purposes, while eminently advisable, is a matter which must be left to the local community in each case."

It is difficult to recall, without a sense of bewilderment, the reception of this proposal by various local bodies. To read now the fears that were entertained if Standard Time was adopted is a study in the possibilities of human error. The Government scheme left local bodies to decide whether or not they would adopt it. Calcutta decided to retain its own local time, and to-day Calcutta time is still twenty-four minutes in advance of Standard Time. In Bombay the first reception of the proposal was hostile; but on reconsideration the Chamber of Commerce decided in favour of it and so did the Municipality. Subsequently the opposing element in the Municipality brought in a side resolution, by which the Municipal clocks were put at Bombay time which is thirty-nine minutes behind Standard Time. On the 1st January 1906 all the railway and telegraph clocks in India were put at Indian Standard Time; in Burma the Burma Standard Time became universal. Calcutta retains its former Calcutta time; but in Bombay local time is retained only in the clocks which are maintained by the Municipality and in the establishments of some orthodox Hindus. Elsewhere Standard Time is universal.

The Calendars.

A full Calendar will be found at the beginning of this book. Below are given details of the other Calendars in use in India.

The *Jewish* Calendar is in accordance with the system arranged A.D. 358. The Calendar dates from the Creation, which is fixed as 3760 years and 3 months before the beginning of the Christian Era; the year is Luni-solar.

The *Mohammedan*, or era of the Hejira, dates from the day after Mahomet's flight from Mecca, which occurred on the night of July 15, 622 A.D. The months are Lunar.

The *Fasli* year was derived from a combination of the Hejira and Samvat years by the order of Akbar; it is Luni-solar. The *Bengali* year seems also to have been related at one time to the Hejira, but the fact of its being Solar made it lose 11 days each year.

The *Samvat* era dates from 57 B.C., and is Luni-solar. The months are divided into two fortnights—*sudi*, or bright, and *badi*, or dark. Each fortnight contains 15 tithis, which furnish the dates of the civil days given in our calendars.

PUBLIC HOLIDAYS IN 1920.

Parsee (Shehenshahi).

Amshedji Naoroz	..	..	March	21
Van Jashan	..	..	April	17
Dar Jashan	..	..	May	16
Arthost-no-diso	..	..	June	17
Atha Gahambars	..	..	{ September	7
			"	8
Parsee New Year	..	..	{ "	9
			"	10
Chordad Sal	..	..	"	15

Parsee (Kadmi).

Van Jashan	..	..	March	18
Amshedji Naoroz	..	..	"	21
Dar Jashan	..	..	April	16
Arthost-no-diso	..	..	May	18
Atha Gahambars	..	..	August	8 & 9
Parsee New Year	..	..	"	10 & 11
Chordad Sal	..	..	"	16

Mahomedan (Sunni).

Ab-e-Barat	..	..	May	5
Amzan 'Id	..	..	June	19
Ohurru	..	..	September	22
Ara Wafat	..	..	November	24
Ahim Fair	..	..	December	25

Mahomedan (Shiah).

Ahadat-i-Huzrat Ali	..	..	June	9
Amzan 'Id	..	..	"	19
Akri 'Id	..	..	August	25
Ohurru	..	..	September	22
Ahadat-e-Imam Husan	..	..	November	9
A-e-Moulud	..	..	"	29

Hindu.

Makar Sankrant	..	..	January	14
Maha Shivratri	..	..	February	18
Holi (2nd Day)	..	..	March	5
Ramnavami	..	..	"	28
Cocoanut Day	..	..	August	29
Gokul Ashtami	..	..	September	6
Ganesh Chaturthi	..	..	"	16
Dassera	..	..	October	22
Divali	..	..	{ November	
			"	10
			"	11

Jewish.

Pesach	..	..	April	3 & 9
Shabuoth	..	..	May	23
Tishabeab	..	..	July	25
Rosh Hoshana	..	..	{ September	13
			"	14
Kippur	..	..	"	21 & 22
Sukkoth	..	..	{ September	27
			October	5

Jain.

Chaitra Sud 15	..	..	April	3
Shravan Vad 13	..	..	September	10
Shravan Vad 14	..	..	"	11
Shravan Vad 30	..	..	"	12
Bhadarva Sud 1 & 2	..	..	"	13 & 14
Bhadarva Sud 3 & 4	..	..	"	15 & 16
Pajushan (Bhadarva Sud 30)	..	..	"	17
Kartik Sud 15	..	..	November	26

Christian.

Day following New Year's	..	..	..	January	2
Christmas.	..	..	..	Dec. 27 to 30	

The Disturbances.

The disturbances, which swept over India during the year, are still in the main the subject of inquiry. The fruits of that inquiry will shortly be published. Therefore nothing more is attempted here than a bare summary of events, pending the issue of an authoritative report.

There was general uneasiness in India following the termination of the war. The rains during 1918 had failed over a wide area. Prices soared to unprecedented heights and despite all efforts to conserve and fairly distribute supplies, a mass of suffering was caused. There was also the reaction after the war, especially as the belief was general that war conditions would cease immediately hostilities closed; the measures of control necessary during the war were also little understood and resented. The atmosphere was therefore tense.

The Rowlatt Act.—In these conditions there was enacted what is called the Rowlatt Act. A strong committee, of a quasi-judicial composition, was constituted to inquire into the prevalence of anarchical crime in India and to suggest measures for its suppression. This Committee, which met under the chairmanship of Sir Sidney Rowlatt, an English judge, recommended that the Government should arm themselves with specific powers, to be put in force when sedition and anarchical crime constituted a public danger. The enactment of legislation to carry into effect these recommendations was strongly opposed throughout the country as an attack on Indian liberties. The opposition came to head when Mr. M. K. Ghandy, one of the most popular Indian publicists, placed himself at the head of what was called the Satyagraha movement, to oppose the laws thus made by acts of civil disobedience.

The Disturbances.—The public feeling thus created led to considerable disorders in Calcutta which were not suppressed until the military were called in. They extended to Delhi in March where a large mob attacked the railway station and had to be dispersed by fire. They flamed up in the Punjab. We must await the report of the Inquiry Commission before stating the special reasons for rioting in the Punjab. The chief centre of the Punjab disturbances was Amritsar. There, on April 10th two men prominently connected with the agitation, Dr. Kitchlew and Dr. Satyapal, were placed under preventive detention. The mob thereupon marched on the Civil Station and was turned back by fire. It immediately entered upon a course of arson and murder. The railway goods yard was attacked and Guard Robinson was murdered. The National Bank was fired and the Manager, Mr. Stewart, and the assistant manager, Mr.

Scott, murdered. The Chartered Bank was attacked but the officers escaped; the Alliance Bank was attacked and the manager murdered. A lady doctor, Miss Sherwood, was brutally beaten. The mob secured practical possession of the city, and on April 13th a large proclaimed meeting was held in an enclosure called the Jallianwallah Bagh. This was fired on by the military under the orders of Brigadier-General Dyer, and upwards of two thousand casualties inflicted, of whom various estimates place the killed at between three and four hundred.

The disorders spread to the Districts. The most serious outbreaks were at Lahore, where the mob had to be dispersed by fire; Gujranwalla, where there was widespread destruction of Government property; the Gujarat district and Kasur, where two warrant officers who were travelling by train were beaten to death. Martial law was proclaimed over a considerable area.

The Bombay Presidency.—Outside Delhi and the Punjab the most serious disturbances were in the Bombay Presidency. On the false news of Mr. Ghandy's arrest, the mob got out of hand in Ahmedabad, burnt a large amount of Government property and murdered a European Sergeant. Order was restored only after the military had fired. At Viramgam, north of Ahmedabad, the station buildings were burnt and an Indian revenue officer was burnt to death. The special train which was conveying troops to Ahmedabad to deal with the disorders was derailed in Kaira. In Bombay city, although the situation was anxious, no serious disorders occurred.

An Inquiry.—These events caused much discussion in India, especially when the sentence promulgated by the martial law commission in the Punjab were promulgated. There was demand for an inquiry; the Indian National Congress instituted an independent inquiry, and an official commission, consisting of Englishmen and Indians was constituted under the chairmanship of Lord Hunter. This commission commenced its inquiries in November. The evidence given before this commission in the Punjab excited a great outcry, which was reflected in Parliament when the reports of the evidence reached London. The particular points on which criticism was focussed were the heavy casualties in the Jallianwallah Bagh and the appearance of a design in some of the punishments to humiliate rather than to prevent.

The Hunter Commission completed its inquiry in March; its report is expected to be published simultaneously in India and in England in April. It has been announced that the report of the Congress inquiry will be published in March.



The Indian Year Book

INDEX
and
IMPERIAL
TRADE GUIDE
to
BRITISH MADE
and
BRITISH OWNED
PRODUCTS

*Order only these and
help knit closer the*

TIES of EMPIRE



JOSEPH SANKEY & SONS, L^{TD}

BILSTON, ENGLAND.

**" NEPTUNE
WROUGHT**



**BRAND,"
STEEL,**

HOLLOW WARE

Enamelled or Tinned.



ART METAL WARE



PRESSED AND STAMPED

METAL WORK

of all Descriptions for the Electrical,
Engineering and Hardware Trades.

Registered Office : **BILSTON.**

Cables :
" SANKEY, BILSTON."

Works : **BILSTON, ETTINGSHALL, WELLINGTON (Salop).**

Wrought Iron Rice Bowls and Mortar Carriers.

Indents through English Merchants.

	PAGE		PAGE
Agriculture, Kashmir	111	Annuities, Indian Railway	209
—Madras Presidency	34	Anthropological Society of Bombay ..	533
—Mysore	83	Appointments of engineers	508
—N. W. Frontier Provinces	71	—Agricultural Service	503
—people engaged in	405	—Bengal Covenanted Pilot Service ..	521
—Punjab	50	—Church of England chaplains	503
—statistics .. 285, 287, 289, 291, 293, 294, 295, 296		—Church of Scotland chaplains	504
Agricultural and Horticultural Society of India (Calcutta)	533	—Civil Veterinary Department	503
—and Revenue Department	17	—Educational Service	504
—Capital	282	—Forest Service	505
—Co-operative Societies	474	—Geological Survey	505
—holdings, nature of	282	—India Office	506
—machinery	290	—Indian Army	507
—progress	288, 292	—Medical Service	516
—services, Indian	503	—King's India Cadetships	507
—Societies	475	—Military Nursing Service	508
Agri-Horticultural Society of Burma ..	533	—Miscellaneous	19
—Madras	533	—Public Works Department	506
Ahmedabad, yarn at	311	—Royal Indian Marine	172, 508
Air currents	298	—State Railways	506
Ajmer-Merwara	76	—Telegraph Department	507
Akbar, Emperor	4	Apprenticeship, Industrial	346
Alexander the Great	2	Archæology	697
All-India Missions	555	Archæological Survey	10
Allies, trade with	232	Architecture	694
Alwar State	90	—Indian	694
Amb State	94	—of new Capital	698
Amber	338, 342	Argentine Consul	145
American Baptist Foreign Mission ..	552	Army Appointments	507
—Telugu Mission	552	—Baroda	85
—Consuls	148	—Commander-in-Chief, work of ..	151
Amir Habibullah	137	—decay of Bengal	150
—and the War	137	—Department	18
—subsidy to	11, 136	—formed	151
Amnesty for Political Prisoners	1	—distribution of	151
Amritsar, riots in	1	—early garrisons	149
Anarchical crime in India	1	—Expeditions Overseas	149
Anatolian Railway Company	143	—expenditure	166, 167
Anchor Line	709	—establishment	149
Andaman and Nicobar Islands	76	—General Staff formed	151
Andhras	3	—Health of	163
Anglican bishops	544	—Hyderabad	81
—Missionary Societies	545	—Imperial Cadet Corps	160
Angling Assocn., W. India	538	—Service Troops	158
Anglo-Indians	408	—Indian, appointments	507
Anglo-Russian agreement	128, 139	—Defence Force	160-164
—(map)	125	—in India	141
Animists	398	—Kashmir	111
Annexation of Oudh	9	—Mysore	85
—Pegu	9	—organisation in 1796	144
—Punjab	9	—1824	150
—Upper Burma	11	—1863	150
		—redistributed	152

ANDREW WHYTE & SON LIMITED.

(Cables, "Whyte Edinburgh.")

—————EXHIBITORS AT—————

BRITISH INDUSTRIES FAIR.

~~~~~

### MANUFACTURERS OF

Account Books, Loose Leaf Ledgers,  
Scholastic Exercise Books, Memorandum  
Books, Copying Letter Books, and Books  
of all descriptions for every purpose.

† Writing Tablets, Compendiums, and General  
Stationery.

† Relief Die Stamped Business Headings a  
Speciality.

† All varieties of Loose Leaf Papers, ruled  
and punched to order.

### GENERAL PAPER MERCHANTS

for all descriptions of Paper.

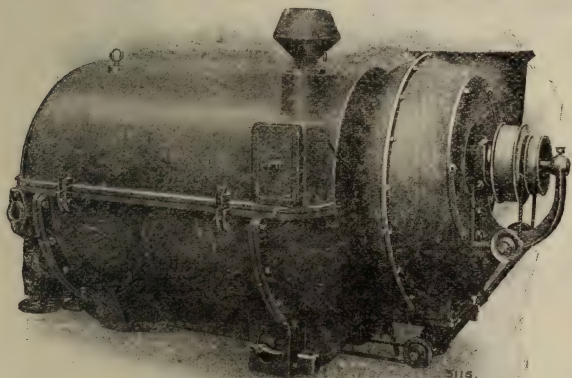
~~~~~

Bothwell Paper Works,—————
Easter Road, EDINBURGH.

	PAGE		PAGE
Army reforms	151		
—reorganisation	10, 151		
—reserves, Indian	159		
—strength of	165		
—supply depot formed	151		
—Temperance Association, Royal	559		
—temperance in	559		
Art, Indian	705		
Arts, industrial	346		
Arya Samaj	397		
Aryans, history of	2		
Aryo-Dravidian people	380		
Asia, trade with	256		
Asiatic Society of Bengal (Calcutta)	533		
Asoka, King of India	2		
Assam administration	74		
—agriculture	73		
—border tribes	141		
—Chief Commissioner of	74		
—communications	73		
—Ecclesiastical Department	547		
—Educational Department	74		
—Finance	74		
—Judicial Department	604		
—land tenure	73		
—manufactures, trade	73		
—minerals, mines	73		
—Native States under	109		
—Officials	74		
—population	73		
—rainfall	73		
—schools	74		
Assistant Superintendents of Police	607		
Association, Bombay Millowners'	372		
—Cotton Trade	374		
—European	529		
—Jute Dealers'	370		
—Grain Merchants'	374		
—Indian Research Fund	686		
—Jute Mills	370		
—Native Piece-Goods	374		
—Nursing	491		
Asylums, Hospitals and Dispensaries	446		
—Lepor	446		
—Lunatic	446		
Auckland, Lord	8		
Aurangzebe	4		
Austria-Hungary Consul.. .. .	145		
		B	
		Babar, Emperor	4
		Badges, Distinctive	598
		Bagh: Jallianwalla	1
		Baghdad Railway	143
		—Map of	144
		Bahawalpur	106
		Bahrein Islands	126
		—communications	126
		—customs duties	126
		—imports	126
		—language	126
		—pearls	126
		—trade	126
		Bajaur	94
		Balance of Trade	260
		Baluchistan administrations	75, 76
		—Agency	85
		—Agriculture	75
		—area	75
		—foundation of province	75
		—fishing	75
		—minerals	75
		—officials	76
		—physical features	75
		—police	75
		—political importance of	75
		—schools	75
		Bamboo and paper-making	337
		Bangalore	84
		Banganapalle	96
		Bank branches	274
		—of Bengal	273
		—of Bombay	273
		—of Madras	274
		—failures	276
		—Industrial	477
		—Rate	279
		—statistics	279
		Bankers' Clearing Houses	280
		—Native private	278
		Banking business, classes of	271
		—in India	271
		—progress	273
		Banks Act, 1876	271
		—and paper currency	271
		—at Baroda	85
		—Bengal, Bombay and Madras	273, 274
		—Co-operative Central	476
		—Deposits in	272
		—Exchange	274

Heenan

WATER COOLERS.



HIGHLY EFFICIENT IN TROPICAL
CLIMATES.

HEENAN AND FROUDE

ENGINEERS, WORCESTER, ENGLAND.

	PAGE		PAGE
Banks, failures of Indian	276	Bengal Council	42
—Joint Stock	276	—Courts of Justice	39
—Presidency	272	—Covenanted Pilot Service	521
Banswara State	87	—Eastern Railway	212
Baptist educational work	551	—Ecclesiastical Department	546
—Missions, American	552	—education	40, 419
—Canadian	552	—Department	41
—English	551	—expenditure	39
—Societies	551	—exports	39
—Tasmanian	552	—factories	38
—Telugu Mission	552	—fisheries	351
—Women's Missionary Auxiliary	551	—Governor's staff	42
Barakar Iron Works	340	—hospitals	40
Baroda administration	84	—imports	39
—agriculture	85	—irrigation	40
—area	84	—Judicial Department	603
—army	85	—languages	38
—banks	85	—lawn tennis	763
—Co-operative Credit Societies	85	—Legislative Council	638
—history	84	—Lieut.-Governors of	43
—Improvement Trust	85	—Local Boards	39
—population	84	—Manufactures	39
—railways	85	—Medical Department	40
—revenue	85	—Municipalities	40
—schools	85	—natural productions	38
Barrackpore Mutiny	150	—officials	42, 43
Basra	126	—opium	39
Bassein, Treaty of	7	—partition of	38
Bastar State	110	—people of	38
Battle of Buxar	6	—police	40
—Chillianwala	150	—population	38
—Hydaspes	2	—reunion of	13
—Maiwand	11	—revenue	39
—Plassey	6	—rising in	12
—Sobraon	150	—schools	40
—Wandiwash	6, 149	—sedition in	12
Belgian Consuls	145	—soil	38
Belladonna	457	—States under	103
Benares	105	—trade	38
—Hindu University	418	Bengali people	380
Bengal administration	39, 42	Bentinck, Lord William	8
—Anarchy in	12	Berar, <i>see</i> Central Provinces.	
—Anarchical crime in	1	—lease of districts	12, 81
—and education	419	Berars, the	81
—and N. W. Railway	212	Bharatpur State	89
—area	38	Bhavnagar State	93
—army, decay of	150	Bhopal State	91
—Bank	273	Bhutan State	93
—Chamber of Commerce	370	Bibby Line	709
—coal production	38	Bible and Medical Mission	556
—Collectors	39	Bibliography of India	773
—Colleges	41, 42	Bihar, ancient kingdom of	2
—Commissioners	39	—famine, 1865-67	469
		—and Orissa, administration	62

THE
ALUMINIUM CORPORATION, LTD.

MANUFACTURERS OF
ALUMINIUM

Aluminium Ingot, Notchbar, and
Rolling Slabs, Aluminium Sheets, Circles
and Thread Matting.

ALUMINIUM POWDER

GRANULATED ALUMINIUM

General Offices and Works:

CLARK STREET, DOLGARROG, NORTH VALES.

Telegrams :
FLUXODE, DOLGARROG.

Telephone :
11, TYN-Y-GROES (Ilandudno).

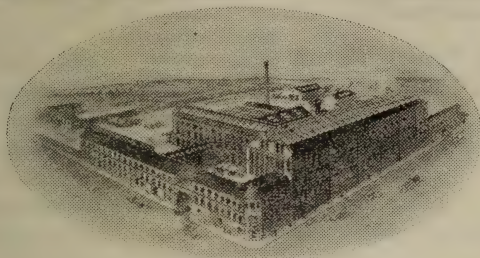
LONDON OFFICE—4, Broad St. Place, London, E.C. 2.

Telegrams :
FLUXODE, AVE, LONDON.

Telephones :
7354 & 7355, LONDON WALL.

	PAGE		PAGE
Bihar and Orissa, agriculture	61	Bombay Golf	765
— — — — — area	61	— Govt., Native States under	96
— — — — — colleges	64	— Grain Merchants' Association	374
— — — — — Council	64	— Improvement Trust	463
— — — — — Courts of Justice	62	— Judicial Department	603
— — — — — District Boards	63	— Legislative Council	635
— — — — — District Officers	62	— Medical Union	534
— — — — — Divisional Commissioners	62	— Millowners' Association	372
— — — — — Ecclesiastical Department	547	— Native Piece-Goods Association	374
— — — — — education	421	— Natural History Society	533
— — — — — famine	469	— pilot service	521
— — — — — fisheries	351	— police	31
— — — — — hospitals	64	— port extension	466
— — — — — indigo	61	— — — — — Trust	463
— — — — — Irrigation Department	62	— Presidency, administration	30
— — — — — Judicial Department	604	— — — — — area	29
— — — — — land tenures	63	— — — — — Bank	273
— — — — — Local Boards	63	— — — — — collectorates	30
— — — — — Medical Department	64	— — — — — colleges	31
— — — — — minerals	62	— — — — — Council	32
— — — — — Municipalities	63	— — — — — Courts of Justice	30
— — — — — Native States under	104	— — — — — District Police	31
— — — — — Orissa officials	64	— — — — — education	31
— — — — — Opium	62	— — — — — electric power in	29
— — — — — people	61	— — — — — fisheries	352
— — — — — police	63	— — — — — Governors	33
— — — — — railways	62	— — — — — hospitals	31
— — — — — rainfall	61	— — — — — Industries	29
— — — — — revenue	62	— — — — — Judicial Department	603
— — — — — Roads and Buildings Dept.	62	— — — — — Local Boards	31
— — — — — schools	63	— — — — — Medical Dept.	31
— — — — — tobacco	62	— — — — — Municipalities	31
Bijapur Agency	97	— — — — — natural productions	29
— — — — — architecture of	695	— — — — — officials	32-33
Bikaner State	89	— — — — — people	29
Bills of exchange	65, 275	— — — — — Political Agents	30
Birds' Plumage, wild	356	— — — — — population	29
Birth and Death Rates	445	— — — — — provincial finance	30
"Black Hole of Calcutta"	6	— — — — — riots in	1
Board, Railway	18	— — — — — schools	31
Boards, Local	437	— — — — — sea trade	29
— — — — — Sanitary	442	— — — — — soil	29
Boils	447	— — — — — staff of Governor	32, 33
Bolivian Consul	145	— — — — — States under Govt. of	96
Bombay	386	— — — — — talukas	30
— — — — — Anthropological Society of	533	— — — — — textile industry	29, 309
— — — — — Art Society	533	— — — — — racing	757-59
— — — — — Baroda and C. I. Railway	212	— — — — — Sanitary Association	534
— — — — — Chamber of Commerce	371	— — — — — Spinners	311
— — — — — — — — Indian Merchants'	373	Botanical Survey	19, 685
— — — — — Cotton Trade Association	374	— — — — — Board of Advice	685
— — — — — Deccan irrigation	31	Boy Scouts	472
— — — — — Ecclesiastical Department	546	Branch lines, railway	210
— — — — — Fisheries	352	Brass-work	347

HOSIERY YARNS



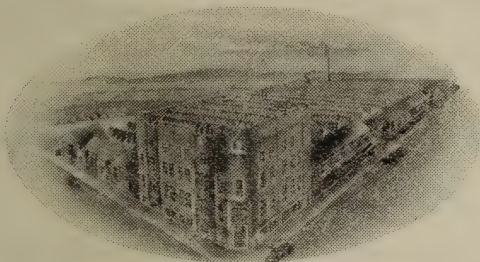
SPRINGFIELD MILLS, KEIGHLEY.

J. & W. BASTARD

— SPINNERS —

LEICESTER, ENGLAND

Combing and Spinning : Springfield Mills, KEIGHLEY
and Bramley, YORKS.



SWINNOW MILLS, BRAMLEY.

American Office :

184, Summer St., BOSTON.

Head Office :

Stamford St., LEICESTER.

Telephone Nos. 2470 and 2471 Leicester ; 89 Stanningley ; 24 Keighley ; 3464 Fort Hill, Boston.

Telegrams : "Yarns Leicester" ; "Yarns Stanningley" ; "Yarns Keighley" ;
"Yarns Boston."

Codes A.B.C. (5th Edition). }
Western Union. }

	PAGE		PAGE
Brazilian Consuls.. ..	145	Burma natural productions	56
Breakbone (Dengue) Fever	454	—officials	59
Britain, Indians in.. ..	501	—people	55
British and Foreign Bible Society	533	—petroleum in	56, 342
—Committee (Indian Congress)	672	—police	58, 59
—India Law	600	—Railway	212
—Medical Asscn. (Bombay)	534	—railways	55
—officers in Native States	80	—revenue	53
—policy in Aden	77	—roads	55
— —in Persia	128	—rubber	56, 336
Bronze Coinage	195	Burmese War	7, 9
Buboes	453	Busra, <i>see</i> Basra,	
Bubonic plague	12, 453		
Buddhism	397		
Budge-Budge riot	13		
Budget, 1918-19	178		
—War	176-178		
—features	177		
Buildings and Roads	230		
Bullion	259-262		
Bundi State	88		
Bureau of Information, Indian Students'	501		
Burma administration	57, 59		
—agriculture	56	Cadet Corps, Imperial	160
—and Tungsten	56	Cadetship appointments	507
—annexation of Upper	11	Cairo to Koweit railway scheme	143
—area	55	Calcutta	386
—borders	141	—Black Hole of	6
—Chamber of Commerce	377	—Improvement Trust	462
—Chief Commissioners	57, 60	—population	386
—Colleges	59	—Port Trust	465
—Commissioners	57	—racing	757
—Council	59	—riots in	1
—Courts of Justice	57	Calendars	829
—development of	56	Cambay	98
—Ecclesiastical Dept	547	Campbell, Sir Colin (Colonel)	9
—education in	59, 428	Canadian Baptist Mission	552
—exports	57	—Presbyterian	553
—fisheries	353	Canals and Navigation	224
—forests	56	— —Soldiers	228
—hospitals	59	—inundation	282
—imports.. ..	57	—irrigation	282
—industries	56	Canal, Chenab	228
—Irrawaddy Flotilla Co.	55	—Colonies	228
—irrigation	58	—Ganges	9, 223
—Judicial Dept.	605	—Jhelum	225
—Justice in	57	—Rates	224
—Legislative Council	642	—Suez	709
—Lieutenant-Governors	60	—system, Punjab	223
—Local Fund	58	Canning, Lord	9
—Medical Department	59	Capital, agricultural	282
—minerals	56	—invested in tea	327
—Municipalities	58	—the New	722-727
—Native States under	108, 109	— — — — — plan of	724

Chemicals

**EXPORTERS
and
IMPORTERS**

For all Industrial Purposes.

Alkali 58%.

Alumina Sulphate.

Ammonia Carbonate.

Ammonia Sulphate.

Oxalic Acid.

Ammonia Chloride.

Bichromates.

Caustic Soda.

Calcium Chloride.

Salteake.

Bleaching Powder.

Epsom Salts.

Glauber Salts.

Magnesium Chloride.

Soda Crystals.

Dyes

For COTTON, WOOL, SILK,
LEATHER, PAPER, JUTE,
SOAP, Etc.

Wide range of

ACID, DIRECT, BASIC DYES, OIL SOLUBLE, PIGMENT AND
BUTTER COLOURS.

Shades matched.

Samples on request.

SEND FOR OUR LATEST BROCHURE.

JAMES C. BARR, Limited,
GLASGOW and LONDON.

Head Office—27, Blythswood Square, GLASGOW.

Telephones—3541 & 3542 Douglas.

Telegrams—"Barriada," Glasgow. "Barchembro," London.

Codes—A.B.C. (5th Edition), Lieber (5-letter) Marconi's International.

SPECIAL FACILITIES FOR EXPORT ORDERS.

	PAGE		PAGE
Carbuncles	447	Chamberlain, Austen, Secy. of State ..	24
Cardamom, Malabar	458	Chandernagar	118
Carpet weaving	348	Chandragupta, Emperor	2
Caste	399	Chaplains	546
Castes, Punjab	49	—Church of England	546
Catholic Churches, Roman	549	—Scotland	546
Cattle	288	Charter Act, new	8
Cawnpore, massacre at	9, 150	Chenab Canal	228
Central Asian Mission	557	—Colony	228
—railways	143	Chief Commissioners of Provinces ..	26
—banks (tables)	482	—Assam	74
—Bombay	477	—Burma	60
—Constitution of	477	—officers, salaries of	568
—Functions of	478	Chillian Consuls	145
—Madras	477	China Opium Agreement	354
—Working of	477	—Tea	328
—Indian Agency	92	Chinese Consul	145
Central Provinces and Berar adminis- tration	66	—in Tibet	139, 140
—agriculture	65	Chitral	94
—area	65	—campaign	11
—Chief Commissioners	69	Chittagong Port	468
—Colleges	67	Cholera, nature	455
—Courts of Justice	66	—prevention	455
—development of	65	—treatment	455
—Ecclesiastical Dept.	548	Christian education, effects of	544
—education	67, 430	—Home Mission, Boys	556
—hospitals	68	—and Missionary Alliance Mission ..	555
—industries	65	—Missions, indirect effects of	545
—irrigation	224	—students	545
—Judicial Dept.	605	Christians in India	545
—land system	65	Christianity	398
—languages	65	—Portuguese Empire and	544
—and Berar Local Boards	66, 67	Chronicle of the Year, 1919, Jan. ..	
—Medical Service	68	—Feb.	
—Municipalities	66	—Mar.	
—Native States under	110	—April	
—officials	68, 69	—May	
—police	67	—June	767
—revenue	67	—July	to
—soil	65	—Aug.	772
—University scheme	67	—Sept.	
—Societies	477	—Oct.	
Centre Party	1	—Nov.	
Ceylon Chamber of Commerce	378	—Dec.	
—and India railway	213	Church in India	544-551
—and India General Mission	556	—of the Brethren Mission	555
—emigration to	390	—and Education	544
—taken	149	—of England, appt. of chaplains ..	544
—tea	328	—Government	544
Chamba State	106	—of Ireland Presbyterian Mission ..	553
Chamber, Indian Merchants'	373	—United Free	551
Chambers of Commerce	369-378	—Societies and Missions	551-556
		—Sweden Mission	557
		—Syrian	544

AMMONIA

& TAR PRODUCTS

Ammonia (all strengths)
 Carbonate of Ammonia
 Muriate of Ammonia
 Sulphate of Ammonia
 Benzol (pure)
 Toluol (pure)
 Xylol
 Solvent Naphtha

Carbolic Crystals
 Cresylic Acid
 Naphthalene (pure)
 Orthocresol
 Anthracene
 Refined Tar
 Disinfectants

METACHROME & ACID DYES

FOR

WOOL.

SODIUM HYDROSULPHITE

CONCENTRATED POWDER.

For Reducing Indigo and Vat Dyes.
 SPECIAL PURE, COMESTIBLE QUALITY.

For Bleaching Sugar and Comestibles.

FORMOSUL (Rongalite C.)
 ZINC FORMOSUL (Decroline)

BROTHERTON

WORKS :
 BIRMINGHAM
 GLASGOW
 LEEDS
 LIVERPOOL

& COMPANY LIMITED.

LEEDS.

WORKS :
 PORT RAINBOW
 SUNDERLAND
 WAKEFIELD
 WORKINGTON

	PAGE		PAGE
Churches, Scottish	550	Colleges, Central Provinces ..	67, 420
Cinchona Plantations	458	—Coorg	432
Circulation of currency notes ..	196	—Madras Presidency	35
Cities	386	—N.-W. Provinces	431
City and Hall Lines	709	—Punjab	52, 53, 425
Citizenship, rights of	493	—United Provinces	46, 423
Civil Servants, duties of	510	—University	414
—Service, appointment of Indians ..	510	Colombo, railway to	212
— — Lord Cornwallis's re-organisa- tion of	510	Colonies contribution to Navy ..	168
— — examinations	510	— — Irrigation	228
— — history of	510	Commander-in-Chief, work of ..	151
— — reserved offices	510	Commerce and Industry	18
—suits	606	Commerce, Chambers of	369
—Veterinary Service	264	— — Bengal	370
Classical Association (Bombay) ..	533	— — Bombay	371
Clearing house, railway	204	— — Burma	377
—houses, bankers'	280	— — Ceylon	378
Climate, effects of tropical	447	— — Cocanada	378
—North-West Frontier	71	— — Indian Merchants'	378
—Punjab	49	— — Karachi	375
Climatic strain, effects of	447	— — Madras	375
Clive, Lord	6	— — Punjab	376
— — Policy of	6	— — S. India	376
Clubs	542	— — U. P.	377
Coal and railways	339	— — Upper India	376
—imported	339	Commercial Intelligence System ..	263
—prices	339	Commission, Co-operation	473
—production (table)	339	—Currency	485
—and railways Bengal Presidency ..	339	—Education	414
Cocaine importation	460	—Effects of, on Education	414
—penalties	460	—Indentured Labour	498
—smuggling	460	—Industries	574
—use	460	—Irrigation	223
Cocanada Chamber of Commerce ..	378	—Public Services	511
Cochin State	95	—Punjab	50
Code, Indian Penal	600	Commissions, Famine	469
Codes, famine	469	Commissioners, Bengal Presidency ..	39
Coffee	330	—Burma	57
Coinage, silver	195	—Chief of Assam	74
Coins, copper	195	— — Burma	60
—nickel	195	— — Central Provinces	69
—silver	195	— — Madras	35
Collectorates, Bombay Presidency ..	30	— — Punjab	50
Collectors, Bengal Presidency	39	— — Divisional, Bihar and Orissa ..	61
—of Districts	27	— — State Technical Scholarships ..	502
—Madras Presidency	35	Committee, Joint	1
—United Provinces	45	Communications, Assam	73
College, M. A. O., Aligarh	418	—Baroda	85
Colleges	414	—Hyderabad	81
—Bengal Presidency	40, 419	—Kashmir	111
—Bihar and Orissa	65, 421	—Mysore	83
—Bombay Presidency	31, 417	—Rajputana Agency	86
—Burma	59, 428	Companies, Life Assurance	364



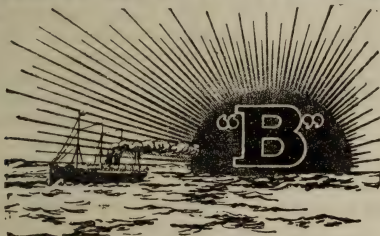
Newspaper, Periodical and
Magazine Proprietors,
Printers, Publishers, and
:: all users of Paper, ::
BEFORE PLACING THEIR ORDERS,
SHOULD APPLY TO US FOR
SAMPLES AND QUOTATIONS.

W. V. BOWATER & SONS LIMITED.

**PAPER MAKERS AND WHOLESALE
AND EXPORT PAPER MERCHANTS.**

"News," Glazed and Unglazed Coloured Printings, Machine Finished and Super Calendered Printings, Coated and Imitation Arts, Typewriting Papers, Art Covers, Cartridges, Writings, M.G., Glazed and Unglazed Natures, Tissues, Sulphites and Browns, Cover Papers, Badami and Native Account Book Papers, and Boards of all descriptions and grades.

Registered



Trade Mark

HEAD OFFICE:
159 Queen Victoria Street, LONDON, E.C.

WAREHOUSES AND WHARVES:

Worship Street, E.

Bowater's Wharf, Bankside.

Morden Wharf, Greenwich.

Carrick Street, Glasgow.

Morden Paper Works.

Cables: "Sparteolus," London.

Codes: A.B.C. (5th Edition) Western-Union.

Western-Union (5-letter edition) and Bentley's.

Bombay Office Telephone Buildings, Home Street,

Madras Office: Post Box No. 237.



	PAGE		PAGE
Company, East India	5	Cotton, exports of	309
— — — — Administration transferred	10	— — — — industry statistics	334
— — — — first formed	15	— — — — manufactures excise duty	314
Concession, Shargarh	124	— — — — progress of	313
Conference Association, Indian Railway .	204	— — — — wages in	313
Congregational Mission	554	— — — — Trade Association (Bombay)	374
— — — — Societies	554	Council, Bengal Presidency	42
Congress, National	671	— — — — Bihar and Orissa	64
— — — — and Reforms	672	— — — — Bill, India	26
— — — — British Committee	672	— — — — Bills	485
— — — — Constitution of	671	— — — — Bombay Presidency	32
— — — — First session	671	— — — — Burma	50
— — — — foundation	671	— — — — Governor General's	17
— — — — split	671	— — — — Imperial Legislative	21, 620
Conservancy, Forest	331	— — — — — — — — additional members	23
Conspiracy case, Lahore	13	— — — — — — — — Budget	21
Constants, tidal	700	— — — — — — — — elected members	22
Constitution of India Office	24	— — — — — — — — meetings of, in 1919	621
Constitutional Reform	645	— — — — — — — — nominated members	23
— — — — Montagu-Chelmsford Report..	645	— — — — — — — — powers of	21
— — — — Moslem League.. .. .	675	— — — — — — — — of India (Home), constitution of	24
— — — — National Congress	671	— — — — — — — — members of	24
— — — — Reception in Country	645	— — — — Madras Presidency	30
Consuls, Foreign, in India.. .. .	145-148	— — — — Punjab	53
Consumptives' Home Society	538	— — — — United Provinces	47
Contracts, Railway	203	Councils Act, Indian	21
Contributions to Navy (table)	168	— — — — and "Secret" communications	24
— — — — famine	469	— — — — Provincial	26
Control, Government, of food	1	Courts, High	600
Convict employment	611	— — — — of Justice, Bengal Presidency	39
Cooch-Behar State.. .. .	103	— — — — — — — — Bihar and Orissa	62
Co-operation Commission, 1901	473	— — — — — — — — Bombay Presidency	30
— — — — and Central Banks	477	— — — — — — — — Burma	57
— — — — recent Government action	480	— — — — — — — — Magistrates'	601
Co-operative Agricultural Societies	475	— — — — — — — — Punjab	51
— — — — Non-Agricultural	476	— — — — — — — — Session	601
— — — — Credit Societies Act, 1904	474	— — — — — — — — Small Causes	601
— — — — — — — — 1912.. .. .	474	— — — — — — — — United Provinces	45
— — — — Societies, financing rural	477	Criminal Investigation Department	607
— — — — — — — — loans to	478	Criminals transported	612
— — — — — — — — management of.. .. .	475	Crop forecasts	296
— — — — — — — — Mysore	83	Crops	282-296
Coorg	76	— — — — — — — — under cultivation	293-295
— — — — education	432	Cross, Red, India	754
Copper	343	— — — — Victoria	755
— — — — coinage	45	Crown of India, Order of	589
Cornwallis, Lord	7	— — — — — — — — transfer to the.. .. .	10
— — — — and Civil Service	510	Cruciferous oilseeds	286
Coroners	601	Cuban Consul	145
Costus root	458	Cultivation, methods of	282
Costa Rican Consul	145	— — — — of drugs	457
Cotton, cultivation of	286, 290	— — — — jute	288
— — — — Duties Act, Indian	265	— — — — linseed	286
		— — — — millet	286

WHY NOT SEND US YOUR INDENTS?

**WE BUY AND EXPORT
GENERAL MERCHANDISE
OF EVERY DESCRIPTION**

SPECIALITIES:—

METALS: HARDWARE: STEEL AND IRON BARS,
PLATES, SHEETS, JOISTS, TEES, ANGLES: HOLLOW-
WARE: TOOLS: MACHINERY: DRUGS AND CHEMI-
CALS: PIECE GOODS: HOSIERY: DRAPERY:
HABERDASHERY: CUTLERY: WATCHES, CLOCKS,
JEWELLERY: SOAPS AND PERFUMERY: TOYS:
LEATHER: CHINA: GLASS: EARTHENWARE: FURNI-
TURE: BOOTS AND SHOES: BICYCLES: MOTOR
CARS: WINES, BEER, SPIRITS: AGRICULTURAL
IMPLEMENTS: BUILDING MATERIALS: CANDLES:
MATCHES: &c., &c.

QUOTATIONS GIVEN C. I. F. TO ANY PORT. SAMPLES
SUPPLIED OR MATCHED. ORIGINAL INVOICES
PROVIDED, ALL DISCOUNTS ALLOWED. SHIPMENT
AND INSURANCE AT LOWEST NETT RATES. COMMIS-
SION AS MAY BE ARRANGED.

ARTHUR CHITTY & Co., Ltd.

101, LEADENHALL STREET, LONDON.

**BANKERS: The London Bank of
AUSTRALIA, Ltd., LONDON.**

Cablegrams: "ACHETEUR, London." Codes: A.B.C. 5th Edition, Lieber's.

	PAGE		PAGE
Cultivation, oilseed	286	Debt of India	185
— pulse	286	— Increase of	189
— rice	284	— Rupee	189
— rubber	336	— Sterling	189
— sesamum	286	Declaratory Act, 1780	600
— sugarcane	286	Delhi and its environs	722
— tobacco	288	— architectural style of	726
— wheat	284	— " boll "	447
Cultivator, Govt. and the	181	— cathedral schemes	727
Currency	196	— Chief Commissioner appointed	725
— difficulties	175	— communications	723
— Commission, cash balances	485	— cost of building	726
— — council bills	485	— district	27
— — evidence	485	— Durbar	13
— — gold standard reserve	199	— expenditure on	726
— — India Office	485	— map of new capital	724
— — report of	485	— Mutiny at	150
— notes	199	— northern site report	723
— — circulation of	199	— riots in	1
— — reserve	199	— siege of	9
— paper	196	— site of new capital	722
— system of India	485	— Town Planning Report	723
— the War and	485	Dengue (dandy) fever	454
— weights and measures	361	Denmark, Consul for	145
Curzon, Lord	12, 473	Denominational schools	544
Cus-cus (vertiver)	458	Department, Archæological	19, 690
Customs	184	— Army	18
— Manners and	701	— Botanical	19
— Revenue	259	— Civil Veterinary	264
— tariff	730	— Commerce and Industry	18
" Cutch " (timber)	332	— Education	18
Cutch State	97	— Finance	17
Cyclonic storms	298	— Foreign	18
		— Geological Survey	19
		— Home	18
		— Industry and Commerce	18
		— Legislative	18
		— Paper Currency	196
		— Post Office	18
		— Public Health	443
		— — Works	18
		— Railway Board	18
		— Revenue and Agricultural	17
		— Salt Revenue	18
		— Survey	19
		— Telegraph	18, 683
Dacca University	418	Departments, India Office	25
Dacoity statistics	610	Deposits, Govt., in banks	193
Dairying	288	Deputy Commissioners of Districts	27
Dalhousie, Lord	8, 9	— — United Provinces	45
Daman Settlement	115	Designs and Inventions	359
Danish Consul	145	Development of Burma	56, 57
Datia State	92	— Central Provs.	65
Death and birth rates	445		
— of Habibullah Khan	119		
— rate in mines	345		

D

LOCKWOOD BROTHERS, LTD.,

SPITAL HILL WORKS, SHEFFIELD.

ESTABLISHED OVER 150 YEARS.



MANUFACTURERS
OF
FILES, SAWS, EDGE TOOLS
AND
CUTLERY OF EVERY DESCRIPTION.
ALSO
INDENT MERCHANTS
FOR THE
INDIAN AND EASTERN MARKETS.

Cable Address: "LOCKWOOD, SHEFFIELD."

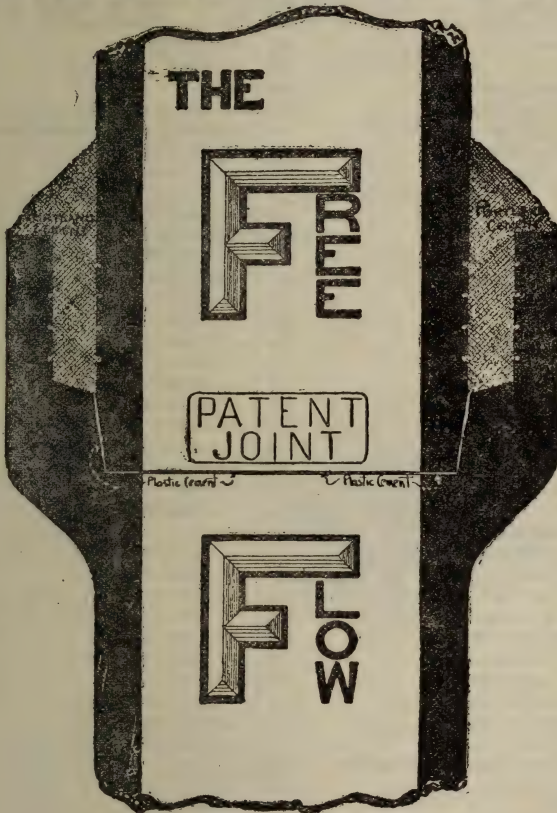
A-1, A.B.C. 4th and 5th editions, Engineering,
Western Union, and Marconi International Codes used.

	PAGE		PAGE
Development of Indian Empire	1	Duties, Civil Servant's	510
—of N. W. Frontier Prov.	71	—import	184-185
Dhar State	92	Dyer, General	1
Dharwar Agency	97	Dysentery	451
Dholpur State	89		
Dhrangadhra State	98		
Difficulties, currency	175		
Digitalis	457		
Dir State	94		
Disciples of Christ Missions	556		
Discontent in India	1		
Disease, Famine and	388		
Diseases	445		
—Tropical	447-457		
Dispensaries, Hospitals and Asylums ..	446	Early marriages	400
Distinguished Service Medal, Indian ..	598	Earnings of railways (diagrams) ..	207
Distress, economic	1	Earthenware	395
Distribution of population	382	East India Company	5
—of Trade	256	—Indian Railway	212
District administration	37	—Indies Squadron	168
—and Local Boards	437	Eastern Bengal Railway	212
—Boards, Bihar and Orissa	63	Ecclesiastical Dept., Assam	547
— — Punjab	51	— — Bengal Pres.	546
— — United Provinces	45	— — Bihar and Orissa	547
—Collectors	27	— — Bombay Pres.	546
—Judges	601	— — Burma	547
—Magistrates, Bengal Pres.	39	— — Central Provs.	548
—Monopoly Excise System	182	— — Madras Pres.	547
—Officer, the	27	— — N. W. Frontier	548
—Officers, Bihar and Orissa	62	— — Punjab	548
—Police, Bombay Pres.	31	— — United Provinces	548
Districts, N. W. Frontier Prov.	70	—Establishments	544
—United Provs.	45	Economic distress	1
Diu, Island of	116	—prosperity in 1919	1
Divisional Commissioners, Bihar & Orissa	62	Ecuador Consul	146
Divisions, Administrative	29	Education	410-433
Domestic servants	409	—Assam	420
Dominion, beginnings of British	5	—Baroda	85
— — French	5	—Bengal Pres.	419
Dongarpur State	87	—Bihar and Orissa	421
Dorjief at Lhasa	138	—birth of	410
Dornakal Mission (native)	555	—Bombay Pres.	417
Drainage	444	—Burma	428
Dravidians, history of	380	— — University	420
Drugs, cultivation of	457	—by Religion	402
—excise system	182	—Central Provs. and Berar	430
—native	457	—Colleges	414
Dues, irrigation	224	—Coorg	432
Dufferin, Lord	11	—Dacca University	418
—Fund, Countess of	490	—Delhi	433
Dupleix	6	—Dept.	18
Durbar at Delhi	13	—defective	410
Dutch Reformed Church (American)		—expenditure	420
Mission	554	—Female	420

KNOWLES' for Pipes.

The last word in Stoneware Pipe Joints.

Cheaper than an ordinary Pipe—Why?



Because—Cost of laying drain is so much less, and can be easily and efficiently done by Native Labour in any part of the World.

AVOIDS LIPPING.

JOHN KNOWLES & CO. (London), LTD.,

38, KING'S ROAD, ST. PANCRAS, LONDON, N.W.

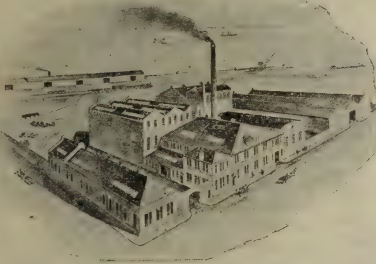
Tel. Address—"John Knowles, London."

Telephone No. 2700 North (2 lines).

	PAGE		PAGE
Education, girls' schools	420	Evangelical (Stockholm) Mission ..	557
—Hindu University	418	Examinations, Civil Service ..	510
—Hyderabad	81	—University	31
—by Provinces	402	Exchange Banks	274
—Macaulay on Indian	410	— — —business (table)	273
—Madras Pres.	35, 415	— — —deposits (table)	274
—Mahomadan University	410	— — —investments	274
—Main features of	401	—Bills of	275
—Mysore	83	—Stock	776
—University	410	Excise	182
North-West Provs.	71, 431	—district monopoly system	182
—normal schools	414	—duty on cotton manufactures ..	314
—Patna University	410	—Free supply system	182
—private schools	414	—on woven goods	314
—Punjab	52, 425	—Out-still system	182
—technical	426	—Right of Vend	183
—United Provinces	46, 423	Expedition, Abor	141
—University reform	422	—Tibet	12, 138
Educational enquiries, recent ..	401	Expenditure, Buildings	230
—progress	403	—capital	179
—services	420	—Indian	178
—Service appointments	504	—irrigation	220
—work, Baptist	551	—marine	168
Electric power in Bombay	29	—Military Services	166
Elevators, grain	357	—on Delhi	726
Elgin, Lord	10	—railway	207
Ellenborough, Lord	8	— — —capital	206
Ellerman ("City" & "Hall") Line ..	709	—revenue producing	179
Embroidery	348	—roads	230
Emigration	390, 392	—Royal Indian Marine	168
—statistics (table)	498	Exports	247
Emperors of India, <i>see</i> Rulers.		—1914-1919	247
Empire, Portuguese	5	—Bengal Presidency	30
—statistics, Indian	382	—Burma	57
—Order of Indian	580	—Cotton	251
Employment of Convicts	611	—Hides, &c.	254
Empress of India proclaimed	10	—Madras Presidency	35
Engineers, appointment of	506	—Manganese	255
English Dominion, beginning of ..	5	—of forest products	333
—Education in India	410	Exports, principal	247
Englishmen murdered	1	—rubber	336
Episcopal (American) Methodist Mission	558	—silk	324
Equivalents, Sterling	509	—tea	254, 328, 329
Essential Oils	458	—textile	309
Established Church of Scotland ..	550		
Eucalyptus	458		
Europe, routes to India from	709		
European Association	534		
—Jute Dealers' Association	318		
—Settlements	5		
—War and India	13		
—and Native Magistrates	600		
—Indians and	408		

Low & Bonar, Ltd.

DUNDEE, SCOTLAND.



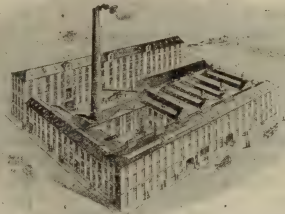
Manufacturers of
Sacks and Bags of
Linen, Cotton & Jute,
for all purposes, also of
Waterproof Canvas &
Tarpaulings,
specially prepared for different
Climates.

Speciality—

PATENT ELASTIC
FIBRE-LINED COTTON
BAGS, JUTE BAGS,
WOOL PACKS, &c.

Patents No. 44046 and No. 18072.

Securing absolute
purity of contents.



DAMP-PROOF BAGS,
WATERPROOF BAGS,
FIREPROOF BAGS,
&c.

Telephone : Branch Exchange, 1754 (7 lines).

Cable Address : "LOBO, DUNDEE."

Codes used : A.B.C., 4th and 5th editions, A.I., Lieber, and Bentley's.

	PAGE		PAGE
F		Financial organisation, India office	24
Factories Act, 1881	363	Fish-curing	350
— 1911	363	— farms	350
— Bengal	38	— guano	350
— Commission	363	Fisheries, Bengal	351
— Madras	35	— Bihar and Orissa	351
— people in	407	— Bombay	352
— tobacco	461	— Burma	353
— United Provinces	45	— Madras	350
— women and children in	363	— Punjab	353
Factory hours	363	Fishing in Baluchistan	75
— inspection	363	— and hunting	405
Fa-hien, Chinese traveller	3	— rights	351
Failures of Indian Banks	276	Flotilla Company, Irrawaddy	55
Families, Houses and	387	Food industries	407
Famine, 1896-7	469	Foods and health	448
— and disease	469	Football in India, 1919	764
— Bihar, 1873-4	469	Force, Indian Defence	130
— codes	469	Forecasts, Crop	296
— commissions	469-471	Foreign Consuls in India	145-148
— contributions	471	— Dept.	18
— cost of	471	— possessions in India	113-118
— great, 1877-8	469	— postage rates	682
— Madras, 1866	469	— trade	232
— of 1899-1900	470	Forest areas (table)	335
— Orissa, 1865-7	469	— conservancy	331
— protection	471	— Dept. Schools	331
— S. India, 1876-8	469	— products	332
— Trust, Indian	471	— revenue	331
— under native rule	469	— Service appointments	505
— Western India, 1868-70	469	— staffs	331
Faridkot State	106	— surveys	332
Feeder railways	210-211	— working	332
Female education	420	Forestry systems	332
Fever, dengue	454	Forests, Burma	56
— malaria	448	— distribution of State	331
— typhoid	450	Fort St. George, Presidency of	34
Fighting Races	151	— Presidents of	37
Finance	173	— William, Governors General of	43
— and the War	176	Foundation of Baluchistan Province	75
— Assam	74	France, Consul for	146
— Baroda	85	— and Maskat	124
— Bombay Provincial	30	Freemasonry	691
— Causes of the changes	174	Free supply system, Excise	182
— C. P. and Berar	67	French claims on Maskat	124
— Co-operative	477	— Consul	146
— Department	17	— Dominion, beginnings of	5, 6
— Hyderabad State	81	— possessions in India	116-118
— Kashmir	111	— railway interests in Syria	143
— Mysore	83	— struggle with the	5, 149
— Provincial	176-180	— treaty with Maskat	124
— Railway	206	Friends' Missionary Assocn.	557
		Frontier Administration	133

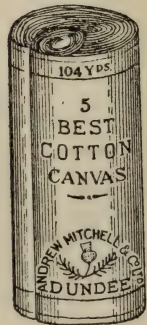
WATERPROOF CANVAS FLAX CANVAS

REGISTERED
MONARCH CANVAS

COTTON CANVAS TARPAULINGS

REGISTERED
TEMPEST CANVAS

SEAMING TWINES &c., &c.



ANDREW MITCHELL & Co., LTD.,

Brown St. Factory, DUNDEE, N.B.

ESTABLISHED 1849.

On British War Office and Admiralty Lists.

Cables : "PRINCES DUNDEE."

PAGE

PAGE

Frontier and the War	134
—campaigns	11
—North-Eastern	141
—policy	133
—Province, N.-W., formed	12, 70
— — — — — map of	131
—trade	258
—tribes	133
Frontiers of India	119
Fund, Gold Reserve	199
—Countess of Dufferin's	490

G

Ganges Canal	9
Gaols	611
Gates to India	136
Gauges, railway	204
Gautemalan Consul	146
Gem stones	343
General Staff formed	151
Geological Survey appointments	505
— — — — — Dept.	19, 685
German Consul	146
—Evangelical Synod Mission	553
—railways in Turkey	143
Germany, India and war with	1, 13
— — — — — and Indian frontiers	119
Ghandi, Mr. M. K.	1
Gillespie, Colonel	149
Girls' schools	420
Glass and Glassware	355
Glossary, Indian	714
Goa	113
Goats	288
Gold, absorption of	261
— — — — — and silver imports	259
—Coinage	194
—production of	338
—reserve fund	199
—standard reserve	199
Golf in India, 1918	765
Gondal State	99
Goods tonnage	208
Gough, Lord	9
—Sir Hugh	150

Government and district boards	437
— — — — — and Banking	271
— — — — — and the cultivator	181
—Bengal	39
—Bihar and Orissa	62, 63
—Bombay	30
—business procedure	16
—Central Provs. and Berar	66
—control of food	1
—control of railways	204
—deposits (tables)	271
—functions	15
—Home	24
—local self	434
—of India	17
— — — — — Madras	35
—personnel	16
—local self, Policy	438
—Punjab	50-51
—revenue	179
—United Provinces	45
Governments, Local	15
— — — — — Provincial	26, 27
— — — — —, trend of	27
Governor-General's Council	17
— — — — — Secretarial Depts.	17-19
— — — — — staff	17
Governors General of Fort William	19
— — — — — India	20
— — — — — of Bengal	43
— — — — — Bombay	33
— — — — — Madras	37
— — — — — of provinces	26
Grain elevators	357
Grain Merchants' Assocn.	374
Graphite	343
Great Indian Peninsula Railway	213
Greek Consul	146
Ground-nut	292
Guano, fish	350
Guarantee, Govt., on railways	202
Guatemala, Consul for	146
Gupta Dynasty	3
Gwalior State	91

A

fter a long run examine your Tyres

and your verdict will be one of pleasurable satisfaction—if your car is equipped with

SPENCER MOULTON

Three Ribbed Tyres

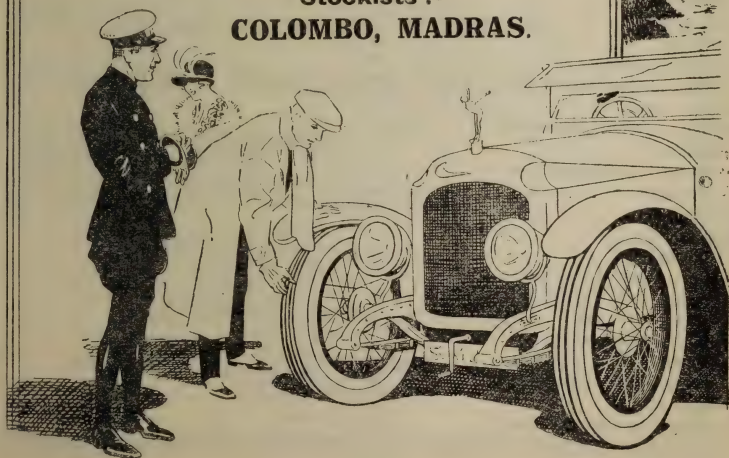
Pleasure in the comfort they have yielded on good, bad, or indifferent roads.

Satisfaction in the petrol economy, they have induced—satisfaction in their splendid resistance to wear and tear, and in their quality of endurance that results in more mileage at less cost.

George Spencer Moulton & Co., Ltd.,

42-46, Wigmore Street, LONDON, W. 1.

**Stockists :—
COLOMBO, MADRAS.**



H

	PAGE
Habibullah Amir	137
—Death of	119
Hardinge, Lord	8, 13
Hastings, Marquis of (Lord Moira)	7
—Warren	6, 7
Health and food	448
—Dept., Public	443
—in the Tropics	447
—of Army	165
Heat stroke	447
Hebrew Christian Mission	557
Henbane	457
Hersha, Emperor	3
Hides, exports of	358
—skins and leather	358
—workers in	406
High prices in India	1
Hill Missions, Kurku and Central India	556
—Tippera	103
Hinduism	4, 394
Hindustani people	394
Hindu university, approval	418
— — — — — objects	418
History of Baroda	84
—coinage	194
—education	410
—Hyderabad	80, 81
—of Kashmir	111
—Mysore	82
—Origins of Indian	2
—Royal Indian Marine	169
Hockey in India	764
Holdings, nature of agricultural	180, 181
—present	180
—private improvements on	181
—Ryotwari	180
—Zemindari	180
Home Charges	173
—Department	18
—Government, History of	24
Hospitals, Bengal Presidency	40
—Bihar and Orissa	64
—Bombay Presidency	31
—Burma	59
—Central Provinces	68
—class of	446
—dispensaries and asylums	446
—numbers of	446
—patients in	446

PAGE

Hospitals, Punjab	53
—United Provinces	47
Hotels in India	713
Houses and Families	388
Humayun, King	4
Huns, white	3
Hunter, Lord	1
—Commission	1
Hunting, fishing and	405
Hutti, Nizam's gold mine at	341
Hydaspes, Battle of	2
Hyderabad	80
—administration	81
—agriculture	81
—area	80
—Berars, lease of	81
—Contingent	81
—history of	80, 81
—legislative Council	81
—minerals	81
—population	80
—railways	81
—revenue	81
—schools	81
—State	80, 81
Hydro-Electric Development	321

I

Immigration	390
Imperial Legislative Council, <i>see</i> Council	21, 620
—Cadet Corps	160
—finance	173
—Institute	687
—Order of the Crown of India	589
—silk specialists	325
—Service formed	11
— — — — — Troops	159
Import duties	184
Imports, 1914-15-16-17	234
—Bengal Presidency	39
—Burma	57
—cocaine	460
—foreign	235-247
— — — — — tea	327

ROBEY & CO., LTD.,

GLOBE WORKS,

LINCOLN, ENGLAND.

ESTABLISHED 1853.

Makers of

HIGH-CLASS STEAM ENGINES OF ALL
TYPES.

AIR COMPRESSORS.

WINDING ENGINES.

THE PATENT "UNIFLOW" ENGINE.

SEMI-DIESEL CRUDE OIL ENGINES.

TRACTION ENGINES.

STEAM TRACTORS AND WAGONS.

CABLES—"ROBEY, LINCOLN."

Codes Used—A1., A.B.C., ENGINEERING, BENTLEY'S
WESTERN UNION,

	PAGE		PAGE
Imports, gold and silver	233	India, specimen tours in	711
—kerosene	343	—Sunday School Unions of	580
—Madras Presidency	35	—Trade of	232
—matches	336	—distribution	255
—principal	235	—exports (tables).. .. .	247
—revenue from	233	—imports (tables).. .. .	235
Improvement Trust, Baroda	85	—summary	232
—Bombay	463	—Viceroys of	20
—Calcutta	462	—Who's who in	780
—finance	465	Indian Agricultural Service	503
—Engineer's Survey	462	—Association for Cultivation of	
—methods	464	Science	535
—plans	464	—architecture	694
—sanitary problem.. .. .	464	—Army, <i>see</i> Army	149
—work	462	—art	705
—working classes	464	—banking	271
Improvements on holdings.. .. .	181	—banks, failures of	276
Incidence of Revenue	181	—Budget	176
—of taxation	436	—Bureau of Information	501
Income and Wages (table).. .. .	281	—Christian Mission	555
—tax	184	—Civil Service	510
Increased Money Power	173	—Veterinary Service	503
Indemnity Bill	1	—Club Principal.. .. .	542
Indentured emigration	497	—contribution to Navy.. .. .	168
—labour	497	—coinage	194
—statistics.. .. .	497	—cotton	290
Independent territory	133	—Cotton Duties Act	265
India and Ceylon	213	—Councils Act	26
—and the War	14	—Currency system	196
—Banking in	271	—Debt	185
—chief towns of.. .. .	386	—Defence force	160
—Clubs in	542	—Dockyards	172
—Companies formed	16	—education	410
—Consuls in	145-148	—emigration	390
—Council Bill	24	—occupations of peoples.. .. .	393
—debt of	189	—Empire Order of the	580
—East Company formed.. .. .	5	—people	380
—Empress of, proclaimed	10	—population	380
—European war and	13	—(tables)	381
—Foreign possessions in.. .. .	113	—religions	392
—Gates to	136	—Ecclesiastical Establishments	503
—Government of.. .. .	17	—Educational appointments	504
—Governors-General and Viceroys of.. .. .	20	—Famine Trust	469
—in 1919	1	—Finance	173
—Industries of	309	—Forests	331
—Office appointments	506	—Frontiers	119, 120
—constitution of	24, 25	—Geological Survey	505
—Departments	25	—glass manufacture	355
—financial organisation of.. .. .	25	—Glossary	714
—Peoples of	380	—law, Europeans and	600
—railway to	143	—legislation, 1919	615
—Religions of	392	—Liberal Club	535
—Routes from Europe to	709		

Thresh Disinfectors

The Thresh Disinfectors are operated by current steam securing rapid evaporation and complete sterilization in minimum time.

The special Portable Disinfectors supplied to the Indian Government is only one of a range of models of Thresh machines, Fixed and Portable, Steam and Furnace Heated, which we are in a position to supply.

Sprayers

The value of Sprayers both for disinfecting purposes and for the spraying of trees and plants is now fully recognised. We can offer a comprehensive series of most efficient appliances of Knapsack and other types.

Laundry Machines

As makers of the highest quality Laundry Machinery with a long and intimate acquaintance with this class of work, we can supply complete installations or single machines to meet any requirements.

Our experience is at the service of all who may be interested, no charge being made for plans, estimates or advice.

Enquiries invited.

Summerscales, Ltd.,

Contractors to the India Office, Admiralty, War Office, etc.
4, CENTRAL BUILDINGS, LONDON, S.W. 1.
Cables: RINSING, LONDON. Code: A.B.C. 5th Ed.

	PAGE		PAGE
Indian manners and customs	701	Indigo	325
—Marines, Royal	508	—Bihar and Orissa	62
—Mathematical Socy.	535	Indo-Aryan people	380
—Medical Service	514	—Ceylon railway connections	213
—Merchants' Chamber of Commerce ..	373	—European Telegraph Dept.	18
—Mints	194	Indore State	91
—Municipalities	434	Industrial apprenticeship	346
—Mutiny, <i>see</i> Mutiny	150	—arts	346
—names	703	—Assam	73
——and titles	597	—Bank	276
—National Congress	671	—Evangelistic Mission	555
—official reports	728	—Baroda	85
—Orders	577	—Bengal	38
—paintings	706	—Bihar and Orissa	61
—peoples, occupations of	404	—Bombay	29
—Police	607	—Burma	56, 57
—politics	1	—Central Provinces	65
—ports	465	—Hyderabad	81
—Press	522	—Kashmir	111
—Law	532	—Madras	34
—Public Works Department	506	—Mysore	83
—Racing	757	—of India	309-314
—Railways	202	—Punjab	50
—(statistics)	215	—United Provinces	44, 45
—gauges	204	Industry and Commerce Dept.	18
—Reforms Act	1	—Coal-mining	339
—Research Fund	686	—Coffee	330
—Salutes	565	—Cotton	286
—Scientific Research Fund	686	—Indigo	325
—Sculpture	705	—Jute	215
—Services, appointments to	503	—paper	337
—social life	398	—tea	327
—Society of Oriental Art (Calcutta) ..	535	—Textile	309
—Sport	757	Infant marriage	401
—Stamp Duties	777	Infirmities	403
—State Railways	211	Insanity	403
—tea	327	Inspection and Legislation	363
—textile industry	309	—Factory Acts	363
—tobacco	461	—of Mines	345
—trade	232	Inspectors of Police	607
——and the War	232	Institutes, Pasteur	446
—(tables)	232	Institution, Medical	446
—Statistics	232	Insurance, Life	364
—train service	711	Intelligence system, Commercial ..	263
—travel	711	Interest on Debt	187
—Village Mission	555	Intoxicating drugs	459
—Women's Medical Service	489	Inundation Canals	223
Indians abroad	493	Invasions, N. W. Frontier Prov. ..	70
—and Europeans	408	Inventions and Designs	359
—in British Columbia	496	Ipecacuanha	457
—in Gt. Britain	501	Ireland Mission, Presbyterian Church of	554
—in S. Africa	494	Iron Ore production	340
India's Marine Expenditure	168	—Tata, and Steel Co.	340

Largest British Makers of GALVANISED SHEETS

Manufacturers of
**BLACK and
GALVANISED
CORRUGATED
and
PLAIN
SHEETS
and
RIDGING.**



Manufacturers of
**STEEL NAIL
STRIPS and
SHEETS.**

**HOOPS.
CUT NAILS.
TACKS and
SHEET BARS.**

Makers of the well-known "Staley-Crown" Brand.

JOHN SUMMERS & SONS,

LIMITED,

SHOTTON, Chester.

	PAGE		PAGE
Irrawaddy Flotilla Co.	55	Jhallianwalla, Bagh	1
Irrigation	223	Jhelum Canal	228
—Bengal Pres.	40	—Colonoy	228
—Bombay Pres.	30, 31	Jind State	107
—Burma	58	Jodhpur State	87
—canals	224	Joint Committee	1
— — — — — and navigation	224	Joint Stock Banks	276
—Central Provinces	67, 225	Judges, District	601
—colonies	228	Judicial Dept., Assam	604
—commission	223	—Bengal Pres.	602
—Deccan	224	— — — — — Bihar and Orissa	604
—Dept., Bihar and Orissa	62	— — — — — Bombay Pres.	603
— — — — — Punjab	223	— — — — — Burma	604
— — — — — created	10	— — — — — Central Provs.	605
—dues	224	— — — — — Madras	604
—early practice of	223	— — — — — N. W. Frontier Prov.	605
—general account of	223	— — — — — Punjab	605
—history of	223	— — — — — United Provs.	605
—inundation canals	223	Junagadh State	99
—Madras Pres.	34, 224	Jurisdiction in Native States	79
—methods	225	Justice, administration of	600
—N. W. Frontier Prov.	71	—justice Bengal Pres. Courts of	39
—policy	225	—Laws and	600
—projects	225	Jute, cultivation of	315
—Punjab	52	—Dealers' Assocn., European	318
—tanks	229	—history of industry	315
—United Provinces	46	—looms	315
—wells	229	—Mills Association	318
Italian Consul	146	— — — — — working agreements	318
Ivory work	347	—trade and the war	318
		Juvenile prisoners	611

J

.. .. .	611
.. .. .	613
.. .. .	109
.. .. .	88
.. .. .	87
.. .. .	457
.. .. .	89
.. .. .	100
.. .. .	110
.. .. .	99
.. .. .	92
.. .. .	266
.. .. .	146
.. .. .	387
.. .. .	89

K

Kaira Agency	98
Kaiser-i-Hind medal	590
Kala Azar	456
Kalat	85
Kapurthala State	107
Karachi Chamber of Commerce	375
—fishing at	353
—Port Trust	467
Karauli State	89
Karenni State	109
Karikal	118
Kashmir (Jammu) administration	111
—agriculture	111
—area	111
—army	111

TRUNKS AND TRAVELLING REQUISITES.

THE UNDERWOOD MANUFACTURING CO.,

Underwood Street, LONDON, N. 1, England.

Manufacturers of Leather, Compressed Fibre and Cane Trunks, Bags, Suit Cases, Ladies' Hat and Visiting Cases, Attache' Cases, etc.

Registered Trade Mark "Fibrex."

Sole Proprietors of "Fibrex," the finest Fibre.

Telegraphic Address:—"Weekender," 'Phone, London, England.

Catalogues free on application—when writing for same, please mention name of your Shipping House.

Telegraphic & Cable Address: "BELLYBAND," LONDON. Established 1866.
Contractors to H. M. War Office and Colonial Governments.

RAWLE & SON, WHOLESALE AND
EXPORT

SADDLERY AND HARNESS

MANUFACTURERS.

Cape Cart, Curricule, Buggy, Mule Trek, Malay, Cab
and every Description of Harness made.

ONLY BEST ENGLISH TANNED LEATHER USED.

Send us your enquiries, large or small.

231 & 232, Blackfriars Road, LONDON, England.

Kashmir electric power	111	Land Tenure Bihar and Orissa	63
—history	111	—United Provinces	44
—industries	111	Landlords, policy towards	181
—minerals	111	Languages, Bengal Pres.	38
—revenue	111	—Central Provs.	65
—schools	111	—Madras Pres.	34
—State	110	—Punjab	50
Kathiawar Agency	98	—United Provs.	44
Kerosene	343	Lansdowne, Lord	11
Kharan	85	—on Persian Gulf	122
Khasi chiefship	109	Las Bela	80
Kyber Rifles	133	Law of British India	600
King and Queen, visit of (1911)	13	—Martial	1
—Edward proclaimed	12	—Officers	602
Kings of India, <i>see</i> Rulers.		—Reports	602
King's India Cadetship appointments ..	507	Lawn tennis	763
Kishangarh State	88	Laws and Justice	600
Kitchener, Lord	151	—of 1919	615
Kolaba Agency	99	—indigenous	600
Kolar gold field	84	Lawa State	88
Kolhapur Agency	100	Lawrence, Lord	9, 10
Kotah State	89	Lead	343
Koweit	126	League, Moslem	675
—railway scheme	143	Lease of Berar Districts	12
Kuria Muria Islands	77	Leather, hides and skins	358
Kurundwad State	100	Legal tender	190
		Legislation and inspection of factories ..	363
		—Birds' Plumage	356
		—Indemnity [Bill	1
		—Rowlatt Act.	1
		Legislative Council, Hyderabad	81
		—Bombay	635
		—Madras	637
		—Bengal	638
		—United Provinces	640
		—Burma	642
		—Imperial	21, 62
		—Punjab	50, 641
		—Dept.	18
		—power	602
Labour, indentured	497	Lemon grass oil	458
—in mines	344	Leper asylums	446
Lac	332	—mission	446
Ladies' Missions	556	Lepers	681
Lady Hardinge Medical College	490	Letter postage rates	138
Lady Minto nursing service	492	Lhasa expedition	146
Lahore Conspiracy Case	13	Liberian Consul	43
Land Act, Punjab	12, 181	Lieut.-Governors of Bengal	60
—Revenue, incidence of	181	—Burma	26
—policy	181	—provinces	54
—system	181	—Punjab	48
—route to India	143	—United Provs.	364
—settlement, permanent	180	Life Insurance	286
—temporary	180	Linseed, cultivation of	
—survey	181		
—system, Central Provinces	65		
—literature on	182		
—tenure, Assam	73		

L

ALFRED JOENSSON

33, EASTCHEAP, LONDON, E. C.

Branches at

TUTICORIN (India).

KHARTOUM.

CAIRO.

BILBAO (Spain).

Importer and Exporter of

CRUDE DRUGS.

SPICES.

ESSENTIAL OILS.

CONSIGNMENTS ACCEPTED.

SEEDS

Improved Farm Root Seeds

Improved Vegetable Seeds

Seedsman ! Enquire for our SPECIAL PRICES, stating, if possible, varieties and quantities required.

KELWAY & SON,

Wholesale Seed Growers,

LANGPORT, ENGLAND.

Cable Address—"KELWAY," Langport.

PAGE

PAGE

Liver, abscess of	452
Live stock	288
Loans, Co-operative Socys'	476
Local Boards	435
— Bengal Pres.	39
— Bihar and Orissa	63
— Bombay Pres.	30
— Central Provs.	66
— expenditure	438
— Govt. revenue	176
— Governments	26
— functions of	15, 16
— Statistics	440
— revenue	438
— Secretariats	27
— self-government	434
London to India railway	143
— Missionary Socy. Mission	554
Lord Kitchener	151
— Wellesley's Policy	7, 149
Lunatic asylums	446
Lutheran Missions	557
Lucknow, defence of Residency	9, 152
— racing	760

M

Madras	386
— administration	35
— & S. M. Railway	213
— area	34
— Bank	274
— capture of	6
— Chamber of Commerce	375
— Collectors	35
— Colleges	35
— Commissioners	35
— Council	36
— Ecclesiastical Dept.	35, 547
— Expenditure	35
— Exports	35
— Factories	35
— famine, 1866	469
— Fine Arts Society	535
— fisheries	350
— Governors of	37

Madras imports	35
— irrigation	34, 223
— Judicial Dept.	604
— Legislative Council	637
— Literary Society	535
— minerals	34
— Municipality	437
— natural productions	34
— officials	35, 36
— population	34
— Port Trust	467
— President of Fort St. George	37
— railways	213
— rainfall	34
— revenue	35
— schools	35
— States in	95
Madura Mission	554
Magadha, Ancient kingdom of	2
Magistrates, Courts of	600
— District	600
— Bengal Pres.	39
— Native and Europeans	600
Mahi Kantha	100
Mahomedan kingdoms	4
— soldiers	151
— University	418
Mahomedanism	398
Mahratta country states	100
— wars	149, 150
Mahrattas	149
Malwand, Battle of	11
Malabar, Cardamom	458
Malaria, causes	448
— prevention	449
— treatment	449
— varieties	450
Maler Kotla State	107
Malwa opium	354
Mammal Survey	685
Mandi State	107
Manganese industry	340
— ore production	340
— prices	341
Manipur	109
Manners and Customs	701
Manufactures, Assam	72
— Bengal Presidency	38
— Bihar and Orissa	62
— Bombay Presidency	21
— Burma	56
— Central Provinces	65, 66
— Glass	358

G. A. HARVEY & Co. (London), Ltd.

METAL PERFORATORS.

WIRE WEAVERS.

ENGINEERS.

TANK MAKERS.

GALVANIZERS.

SHEET METAL WORKERS.

GREENWICH METAL WORKS,

Woolwich Road, London, S.E. 7,

and

SUFFOLK HOUSE,

5, Laurence Pountney Hill, London, E.C. 4.

CABLES : "Cheaper, London."

**CODES : Lieber's No. 5, A.B.C. 6th Ed., Marconi International,
Hamilton's Wire Code.**

*Our Catalogues are being revised, and can be obtained through any
Shipping House.*

Established 1857.

Highest Quality

Round and Flattened Strand Steel Wire Ropes

In All Constructions

**for Coal Hoists, Cranes, Sheer Legs, Engineering, Shipping
and Mining Purposes.**

**GLAHOLM & ROBSON, Ltd.,
SUNDERLAND, ENGLAND.**

	PAGE		PAGE
Manufactures, United Provinces..	44	Merwara Ajmer Map	121
Manures, necessity of	284	Metals	347
Map of Anglo-Russian Agreement territory	125	Metal working	347
—Baghdad Railway	144	—workers	347
—Mesopotamia	121	Metallic reserve	199
—of the Middle East	129	Metcalf, Sir Charles	8
—North-West Frontiers.. ..	131	Meteorology.. ..	297
—Persian Gulf	123	Methodist Episcopal (American) Mission.	558
Marathas, <i>see</i> Maharattas.		—(Free) Mission	558
Marriage	400	Meter-gauge railways	204
Marine, Royal Indian	169, 506	Mexican Consul	146
— — — — —appointments	172	Mica	343
— — — — —dockyards.. ..	170, 172	Migration	390
— — — — —expenditure	168	Mileage, railway	217
— — — — —history	169	— — — — —(tables)	217-222
— — — — —personnel.. ..	171	Military Nursing Service.. ..	508
— — — — —prize slips	170	— — — — —Services, expenditure on	166, 167
— — — — —river transport	170	Millet, cultivation of	286
— — — — —transportwork	169	Millowners' Association, Bombay	372
— — — — —war service	169	Mineral production (tables)	338
Marks, Trade	357	Minerals, Assam	78
Martial law.. ..	1	—Baluchistan	75
Maskat	122	—Bengal Presidency	38
—French treaty with	124	—Bihar and Orissa	62
Massacre of Cawnpore	9, 150	—Bombay Presidency	29
Match factories	336	—Burma	56
Matches	336	—Hyderabad	81
Mayo, Lord	10	—Kashmir	111
Measures, Weights and	361	—Madras Presidency*	34
Medal, Kaisar-i-Hind	590	—Punjab	50
—Indian Distinguished Service.. ..	598	—radio-active	344
— — — — —Meritorious	599	—United Provinces	44
— — — — —Order of Merit.. ..	599	Mines and Minerals of India	338
— — — — —of British India	599	—Death rate in	345
Mediæval dynasties.. ..	3	—inspection of	345
Medical aid to women, report	491	—people employed in	405
— — — — —scheme	490	Mining accidents	345
—Colleges	446	—employees	344
—Institutions	446	Mint, Bombay	194
—missions	555	—Calcutta	194
—Service—appointments to	518	Minto, Lord	7, 12
— — — — —Civil appointments	519	—Nursing Service, Lady	492
— — — — —duties	519	Mints	194
— — — — —examinations for.. ..	515	Miraj State	100
— — — — —Indians in the	515	Miscellaneous appointments	19
— — — — —organisation	515	Mission Schools	551
— — — — —origins of.. ..	515	—to Lepers	555
— — — — —pay and pensions	517	Missions, All-India	555
Meerut, Mutiny at	150	— — — — —and Enemy Trading Act	550
Mennonite (American) Mission	556	—Baptist Societies	551
Merchandise Marks Act	357	—Church of England	544
Merchants' Chamber, Indian	373	—Congregational Societies	554
Merwara, Ajmer	76		

ARTICLES for the MANUFACTURE & DECORATION of GLASS—POTTERY—METALS

**GLASS
COLOURS
& STAINS,
and
METALLIC
OXIDES.**

**LIQUID GOLD
& LUSTRES.**

**UNDERGLAZE
and
ENAMEL
COLOURS.**

GROUND BONE, FELSPAR,
FLINT, FLUORSPAR,
QUARTZ, STONE,
WHITING, Etc.

CARBONATE
& SULPHATE
OF BARYTES

TRADE MARK

WENGERS, LTD.

CERAMIC COLOURS & CHEMICALS

ETRURIA
STOKE-ON-TRENT
England

COLOURS
FOR
POTTERS,
GLAZED BRICK
MANUFACTURERS,
& GLASSMAKERS.

OXIDES OF
ANTIMONY, ARSENIC,
CHROME, COBALT,
SMALT, COPPER, IRON,
MANGANESE,
NICKEL, TIN,
TITANIUM,
URANIUM,
ZINC,
Etc.

PREPARED
ENAMELS
FOR
CAST &
SHEET IRON,
COPPER & JEWELLERY.

Samples & Price Lists
Sent on
Demand

**ENAMELS
for CAST and
SHEET IRON,
COPPER,
GOLD, SILVER &
GILDING METAL.**

**GLAZES &
FRITTS,
PLUMBIC &
LEADLESS,
Transparent,
Opaque &
Coloured.**

UTENSILS—IMPLEMENTS—MACHINERY.

EXPLANATORY PRICE LIST & SAMPLES ON DEMAND.

FLETCHER HARDWARE Co., Ltd.,



**HARDWARE AND GENERAL MERCHANDISE,
BIRMINGHAM, ENGLAND.**

**AGENCIES—London, Liverpool, Manchester, Paris, Brussels,
Rotterdam, Copenhagen, Stockholm, Christiania, Seville,
Madrid, Valencia, Santander, Lisbon, Oporto, Melbourne,
Hong Kong, Shanghai, Batavia, Sourabaya, Singapore, Cairo.**

BLOCKS

From PHOTOGRAPHS
for

• Catalogues •
• • Booklets • •
Advertisements
• • Souvenirs • •
Estate Sales &c.

AEROGRAPH RETOUCHING

DESIGNS *for* Covers • Labels •
Advertisements • Box-tops • Letter-heads •

GARRATT & ATKINSON

Artists & Blockmakers

ESTAB
1894

Warwick Works • EALING

LONDON • W. 5

	PAGE		PAGE
Native Piece-goods Association	374	Northbrook, Lord	10
—private bankers	278	—Society	501
—States annexation through lapse ..	79	North-Eastern Frontier	141
—British Officers in	80	Northern India Salt Revenue	18
—education of ruling chiefs	80	North-West Frontier Province, adminis-	
—in	402	trative districts	71-72
—extent of	79	—agriculture	71
—Imperial Service Troops	159	—area	70
—jurisdiction	79, 80	—development	70
—obligations	79	—Ecclesiastical Department	548
—policy towards	80	—education	431
—political officers	80	—formed	12, 70
—population	79	—invasions	70
—railways	211	—irrigation	71
—relations with	79	—Judicial Dept.	605
—rights of	79	—map of	131
—supervision of	80	—mountains	71
—tribute	112	—municipalities	72
—under Assam	109	—officials	72
—Bengal Presidency	103	—police	72
—Bihar and Orissa	104	—population	70
—Bombay Presidency	96	—races	71
—Burma	108, 109	—rainfall	70
—Central Provinces	110	—sex proportion	70
—local governments	95	—trade	71
—Madras Presidency	95	—states	94
—Punjab	106	—Western Railway	213
—Travancore	95	Norwegian Consul	147
—United Provinces	105	Notes, currency	196
—students and religion	555	Nova Goa	114
Natives, appointment to Civil Service ..	510	Nursing in India	491
Natural productions, Bengal Presidency ..	38	—Service, Lady Minto	492
—Burma	56	—Q. A. Military	508
—Madras Presidency	34		
—United Provinces	44		
Navanagar State	99		
Navigation and irrigation canals	224		
Navy, contribution to (table)	168		
—Colonies' contribution to	168		
—East Indies Squadron	168		
Nazarana payments	112		
Nellore Fish Farm	351		
Nepal	93, 94		
Netherlands Consul	147		
Neurasthenia	448		
New Capital	722		
New Zealand Presbyterian Mission	553		
Newspapers Act, 1910	532		
Nickel coinage	195		
Nicobar Islands	76		
Nizam's Gold Mine, Hutti	341		
Non-Indian Religions	397		
		Obligations of Native States	79
		Occupations, Indian peoples	404
		Officers, Army, and the war	159
		—Reserve of	159
		—Consular in India	145-148
		Official Reports	728
		—Trustee	689
		Officials, Assam	74
		—Baluchistan	75, 76

The Anglo-Russian Engineering Co., LIMITED.

Specialists in all Types of

EMERY BELT GRINDERS AND SANDPAPERING MACHINES.

Suitable for Steel, Iron, Brass, Gun, Aluminum, Wood,
Veneer, Threeply, Bone, Ivory, Etc.

Size of Bands

"ARECO"

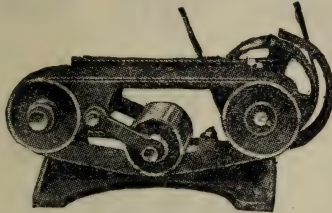
4 inches wide.
36 ins. Circumference

"MEDSANDER"

8 inches wide.
6 feet 2 ins. Circumference

"LARSANDER"

14 inches wide,
15 feet Circumference.



THE ARECO.

Let us know
your Require-
ments.

We will supply
the Machine.

WHEREVER A LADDER IS USED A

"JIPHEE"

LADDER PLATFORM IS REQUIRED.



Saves
Feet, Boots,
Time, Labour,
Money.

Agents
Wanted.

Mild Steel used throughout and Seasoned Wood Platforms.

THE ANGLO-RUSSIAN ENGINEERING CO., LTD.,

374, 378, Old Street, LONDON, E.C. 2.

Cable Address :

Enganrussi, London.

All our Products are of

British Manufacture
Throughout.

Codes :

Marconie, Bentley's
A.B.C. 5th Edition

TUBES

**Iron
Steel
Black
Galvanized**



**The Scottish Tube Co., Ltd.,
34, Robertson Street, GLASGOW.**

BRANCHES :

SYDNEY (N. S. W.)

WELLINGTON (N. Z.)

and JOHANNESBURG.

	PAGE		PAGE
Peoples of India, types	580	Police, Punjab Prov.	52
Perim Island	77	—Recruitment	608
Persia	128	—statistics	609
—Agreements with	128-132	—training schools	608
—British policy in	128	—United Provinces	46
—and Seistan	123	Policy of Government defined	438
Persian Consuls	147	—towards Native States	80
—Gulf	120	Political Agents, Bombay Presidency	30
— —and Germany	122	—causes of Mutiny	150
— —and France	122	—Officers	80
— —and Russia	122	Politics, Indian	1
— —and Turkey	122	Poloin India	765
— —Europe and	122	Pondicherry	6, 117
— —map of	123	Poona and Indian Village Mission	555
— —(Pirate Coast)	124	Population, Aden	77
— —railway lines	143	—Assam	73
— —shore	127	—Baroda	84
Personnel of Government	16	—Bengal Presidency	38
Peruvian Consuls	147	—Bombay Presidency	29
Petroleum, output of	342	—Burma	55
—production of	342	—Central Provinces	65
Philatelic Socy. of India	536	—jail	611
Photographic Socy. of India (Calcutta)	536	—Madras Presidency	34
Piece-Goods Assocn., Bombay Native	374	—movement of	388
Pilgrimages and Sanitation	444	—Native States	79
Pilot Service, Bengal Covenanted	521	—N. W. Frontier Province	70
— —Bombay	521	—Punjab	49
Pirate Coast	124	—Rajputana Agency	86
Plague, bubonic	453	—United Provinces	44
—description of	452	Port Extension, Bombay	466
—history of	452	—Trust, Bombay	466
—pneumonic	454	— —Calcutta	465
—in Punjab	53	— —Chittagong	468
—septicemic	454	— —Karachi	467
—treatment of	454	— —Madras	467
Plassey, Battle of	6	— —Rangoon	467
Plumage, Wild Birds'	356	Ports, Indian	465
Pneumonic plague	454	Portuguese Consuls	147
Police	607	—Empire	5
—administration	608	— —and Christianity	549
—tables	609	—possessions in India	113
—Baluchistan	75	Possessions, foreign, in India	113
—Bengal Presidency	40	—French	116
—Bihar and Orissa	63	Post Office circles	681
—Bombay District	31	— —Dept.	18
—Burma	58	— —growth of	683
—Central Provinces	67	— —revenue	682
—constables	607	— —staff	681
—distribution of	607	— —tariff	681
—inspectors	607	— —and Telegraph	681
—N. W. Frontier Province	72	Postage rates, foreign	682
—offences	610	— — —letter	682
—organisation	607	— — —parcels	682



London 1851. Sydney 1888.

Established 1820.

London 1895. Adelaide 1887,

Telegrams and Cables—MASTICATOR, Isling, London.

RUBBER MANUFACTURERS.**THE OLDEST RUBBER FACTORY IN THE WORLD.****SURGICAL AND MECHANICAL GOODS.**

Water Bottles.
Douche Tubing.
Air Cushions.
Bed Sheeting.
Urinals.
Matings.

Rickshaw and
Cab Tyre.
Syringes.
Spray Bellows.
Corks.
Rings.

Washers.
Valves.
Hose.
Tubing.
Insertion.

Billiard Strip.
Stamp Rubber.
Printer's Blanket.
Tap Washers.
Sports Goods.

Write for Catalogues and Prices.

JAMES LYNE HANCOCK, Ltd.,
266, Goswell Road, LONDON, E.C. 1.

Cable Address:

"CLIPS", Walsall, England.

Code:

A. B. C. 5th Edition.

DAVID BIRD & Co.,**Central Works, Shaw Street, Walsall, ENGLAND.****ESTABLISHED 1869.***Manufacturers of*

Harness Furniture, Hames, etc., for all Markets.

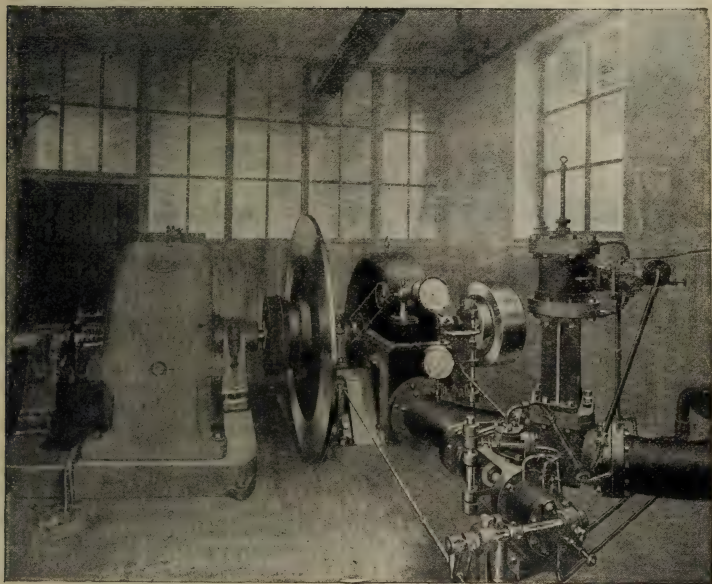
Contractors to H. M. Government and the
Principal Railway Companies.

Casters in Brass, Nickel, Copper, Gun Metal, etc.

Send for Catalogues and Prices.*Agents for India :—***Mr. M. D. SHAW,****66, Rogay Buildings, Apollo Street, FORT, BOMBAY.**

	PAGE		PAGE
Posts and Telegraphs	681	Provincial Councils, working of	26
Precedence, Table of	561	— finance	10
Presbyterian Church of Ireland Mission ..	553	— governments	26, 27
— — — — — N. American Mission	553	— — — — — trend of	27
— — — — — Mission	553	— salaries	568
— — — — — Societies	553	Proving of Wills	690
Presidency Banks	273	Public Health Department	443
— — — — — Corporations	436	— — — — — Service Commission	511
— — — — — of Bombay Council	32	— — — — — Trustee	688
— — — — — Madras	36	— — — — — Works Department	18, 506
— — — — — towns	436	— — — — — — — — — — appointments	506
Presidencies, administration of	26	Pudukottai	96
— — — — — formed	15	Pulicat Oyster Farm	350
Presidents of Fort St. George	37	Pulse, cultivation of	286
Press Act, 1910	532	Punchayets	434
— — — — — censorship	532	Punjab administration	50, 53
— — — — — in India	522	— — — — — agriculture	50
— — — — — law, Indian	532	— — — — — annexed	9
— — — — — statistics	523	— — — — — area	49
— — — — — Vernacular	523	— — — — — canal system	52
— — — — — — — — — — Act repealed	11	— — — — — castes	49
Prices, high in India	1	— — — — — Chamber of Commerce	376
Prickly heat	447	— — — — — climate	49
Primary schools	414	— — — — — colleges	53
Prince of Wales' tour	1, 10	— — — — — Commission	50
Principal Clubs in India	542	— — — — — Commissioners	50
Prisoners' employment	611	— — — — — Council	53
Prisoners, juvenile	611	— — — — — Courts of Justice	51
Procedure of Government business	16	— — — — — disorders in	1
Proclamation of Empress of India	10	— — — — — District Boards	51
— — — — — King Edward	12	— — — — — Ecclesiastical Department	548
— — — — — Royal	1	— — — — — Education Department	52, 53
Produce, agricultural	283	— — — — — educational progress	425
Production of coal (table)	339	— — — — — fisheries	353
Production of coal in Bengal	38	— — — — — forests	331
— — — — — gold	340	— — — — — hospitals	53
— — — — — iron ore	340	— — — — — irrigation	52
— — — — — minerals (tables)	338	— — — — — — — — — — Department	52
— — — — — petroleum	342	— — — — — Judicial Department	605
— — — — — rubber	336	— — — — — Land Act	12, 181
— — — — — tea	327	— — — — — languages	50
— — — — — timber	331	— — — — — Legislative Council	641
— — — — — woven goods (tables)	312	— — — — — Lieut.-Governors	54
— — — — — yarn	305	— — — — — Medical Dept.	53
Professions	407	— — — — — minerals	50
Project, Vizagapatam Harbour	468	— — — — — Municipalities	51
Protection of Children Society	538	— — — — — officials	53, 54
— — — — — from Famine	471	— — — — — plague in	53
Provinces, Chief Commissioners of	26	— — — — — police	52
— — — — — Governors of	26	— — — — — population	49
— — — — — Lieut.-Governors of	26	— — — — — provincial police	52
— — — — — United	44	— — — — — rainfall	49
		— — — — — religions	49

WATER TURBINES

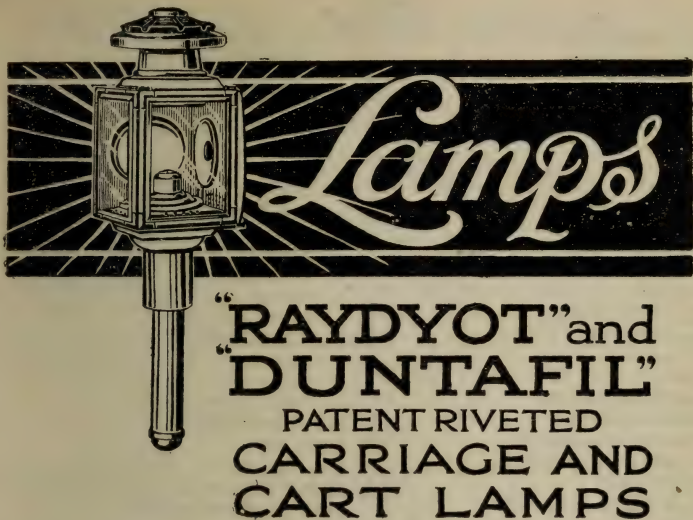


To Suit any Fall or Power.

SENSITIVE GOVERNORS.

CENTRIFUGAL PUMPS.

GILBERT GILKES & Co., Ltd.,
KENDAL.



COMMERCIAL MOTOR LAMPS, also 2518 LANTERNS.

Made by a firm of over 70 years reputation in Lamp construction.

Best for export, because they are made by a patent process, the invention of the manufacturers that assures the highest efficiency in every part.

RIVETED AND GROOVED THROUGHOUT

Patterns specially suitable for Indian requirements

Orders through British Merchants.

Patentees & Sole Manufacturers
JAMES NEALE & SONS LTD
 Graham Street, Birmingham.

	PAGE		PAGE
Rainfall, Assam	73	Revenue, from imports	233
— Bihar and Orissa	61	— Government	176
— and Crops	282	— Hyderabad	81
— Madras Presidency	34	— incidence of Land	181
— North-West Frontier Provinces	71	— irrigation	226
— Punjab	49	— Kashmir	111
Rains	297, 304	— Land	180
Rajpipla State	101	— Local government	27
Rajputana, Lawa State of	88	— Madras Presidency	35
— agency	86	— Mysore	82
Rajputs	3	— opium	180, 183
Ramdrug State	100	— Post Office	681
Rampur State	105	— railways	207
Rangoon Literary Society	536	— salt	183
Rangoon Port Trust	467	— System, Land	180
Ranjit Singh	8	— tables of	179
Rate, Bank	279	— telegraph	681
Rates and taxes, municipal	436	— United Provinces	46
— Births and Deaths	445	Rewa Kantha Agency	101
— of interest moneylenders	473	Rewah State	91
Rebate Railway contract system	202	Rice, cultivation of	284
Red Cross Work	754	Right of Vend, Excise	183
Reform of weights and measures	361	Rights of citizenship	493
— Indian army	151	— of Native States	79
— social	8, 399	Riots in Ahmedabad	1
Reformatory schools	612	— — Amritsar	1
Reforms, Constitutional	645	— — Bombay	1
— — Act, Indian	1	— — Calcutta	1
— — Montagu-Chelmsford Report	645	— — Delhi	1
Regions beyond Missionary Union	555	— — India	1
Regulations, Passport	756	— — Virangaum	1
Religion, native students and	545	Rapon, Lord	11
Religions of India	392	Rise in exchange	173
— Punjab	49	Rising in Bengal	6
— United Provinces	44	Roads and Buildings Department, Bihar and Orissa	62
Report of Currency Commission	485	— — — United Provinces	46
— Indian Official	728	— — — Burma	55
Reports, Law	602	— — — expenditure	230
Research Fund, Scientific	687	Roberts, Lord	11
— Sanitation	441	— — on Aden	77
Reserve Currency Notes	196	Roman Catholic Churches	549
— Fund, Gold	199	Rosin	332
— Gold Standard	199	Routes to India from Europe	709
— Indian Army	159	Rowlatt Act Agitation	1
— Metallic	199	— Sir Sydney	1
Revenue and Agricultural Department	17	Royal Army Temperance Association	559
— Baroda	85	— — Asiatic Society (Bombay)	533
— Bengal Presidency	39	— — Indian Marine	169, 508
— Bihar and Orissa	62	— — — appointments	508
— Burma	58	— — Proclamation	1
— Central Provinces	67	— — Society of Arts	536
— Customs	259	Rubattino S. S. Co.	709
— Forest	331		

"HYDRAPOL" "SOLVOTEXTOL"

DEGREASING AGENT

POWERFUL OIL EMULSIFIER

ULTRAMARINE BLUES.

"BEAR" BRAND GAMBIER. "BROFO" CHROME TAN.

ACIDS

Acetic Acids
(various strengths)
Citric Acid
Formic Acid
Lactic Acid
Oxalic Acid
Tannic Acid
(Tech. & Leviss.)
Tartaric Acid

SODIUM

Acetate
Bisulphite
Carbonate
Caustic
Chlorate
Sulphate Tech.
Hyposulphite
Nitrite
Perborate
Phosphate
Prussiate
Sulphide

Aniline Salts

Antimony Salts
Alumina Acetate
Bichromates
Chlorate of Potash
Chrome Acetate
Chrome Alum
Cutch
Dextrines
Epsom Salts
Formaldehyde
Gum Arabic
Gum Tragacanth
Farina

Iron Acetate

Lead Acetate
Sulphur Refined
Tin Crystals
Tin Perchloride
Tartar Emetic
Flake Litharge
Iron Sulphate
Copper Sulphate
Zinc Dust

DETERGENTS BLEACHING AGENTS

ANILINE DYES

Basic
Acid
Direct

CHROME COLOURS

Sulphur Colours
Vat Dyes
Indigo

Fustic Extract

Hematin
Logwood Extract
Malt Extract

MORDANTS FINISHES

Rice Flour

Sago Flour
Tapioca
Wheat Starch

Beta Naphthol
Alpha Naphthylamine
Hydrosulphites

Aniline Oil
Turkey Red Oil
Tallow

Paraffin Wax
Vegetable Waxes
Spermaceti Wax

Aluminium Powders
Bronze Powders
Magnesium Chloride

Glycerine and
Glycerine Sub.
Glucose

Sulphate of Alumina
Sulphocyanide of Alumina
Sulphocyanide of Barium

FOR
HOME



AND
EXPORT

MANCHESTER

10, Dolefield,
Bridge Street.

Telegrams "Idem,
Manchester."
Telephones
Central 3283,
3284, 3285.

Proprietor—JOHN BROWN.

Registered Trade Marks.

"BROFO BRAND" "HYDREAD BRAND"
"BOXING BEAR BRAND"
"DOME BRAND" "BEAR BRAND"

LONDON

21, Farringdon St.,
E.C. 4.

Telegrams
"Cereblue, Cent.
London."
Telephones
City 9496, 9497.

	PAGE		PAGE
Rubber, Burma	56	Sanitation, grants	443
—cultivation	327	—organisation	441
Rulers of India, Akbar	4	—progress in	443
—Asoka	2	—rural	444
—Aurangzeb	4	—sanitary services	442
—Babar	4	—training	443
—Chandragupta	2	Santhal Mission	558
—Gupta dynasty	3	Satara Jagirs	102
—Harsha	3	Savantwadi State	102
—Humayun	4	Scandinavian Alliance Mission	554
—Mahomedan	4	School of Oriental studies	231
—Mediaeval dynasties	3	Schools, <i>see</i> Education and Colleges.	
—Mongolian kings	3	Scientific Research Fund	686
—Mughal dynasty	4	—societies	533
—Shahjahan	4	—Surveys	685
—Southern dynasties	3	Scotland, Established Church of	550
Ruling Chiefs, education of	412	—United Free Church of	551
Rupee debt	188	Scouts, Boy	472
—conversion of	187	Scytho-Dravidian people	380
—extent	187	Sea trade of Bombay	466
—interest days	187	Secondary schools	414
Rural sanitation	444	Secretariat Depts., Governor-Generals	17-20
—schools	410	Secretaries of State	25
Russian Consuls	148	Secretary of State, powers of	24
—menace	11	Sedition in Bengal	12
—railway to Lake Urumia	143	Seistan (Persia)	128
—Tehran	143	Self-Government, local	434
Russia and Tibet	138	Sepoy, mutiny	150
—understanding with	13, 139	Septicæmic plague	454
Rutlam State	92	Servants of India Society	537
Ryotwari holdings	180	—Domestic	409
		Service, Indian Civil	510
		—Medical	514
		—Lady Minto Nursing	492
		Services, Educational	504
		—Organisation	516
		—Pay and Allowances	517
		—Pension	517
		—Pilot	521
		—Bombay	521
		—Bengal	521
		—Public Commission	511
St. John Ambulance Assocn.	754	Sesamum, culture of	272
Salaries of Chief Officers	568	Sessions, Courts of	601
—Provincial Officers	569	Settlement Officers' duties	180
Salt Department	183	Settlements, Dutch	5
—Range mines	183	—European	5
—revenue	183	Seva Sadan	537
Salutes, table of	561, 565	Seventh Day Adventists Mission	556
Sandalwood oil	458	Sex	400
Sandur	96	—proportions of, in N. W. F. P.	70
Sangli State	100	Shahjahan	4
Sanitation	441	Shahpura chiefship	89
—Agencies	442		

JOHN DORE & Co.,

SUCCESSORS TO AENEAS COFFEY & SONS.

ESTABLISHED 1834.

COPPERSMITHS,
 BREWERS' & DISTILLERS' ENGINEERS,
 CHEMICAL PLANT MAKERS,
 ALUMINIUM & TIN WORKERS,
 BRASS FINISHERS.

Cables: "Cuivre Bochurch, London."
 98, 99, 100, HIGH ST., BROMLEY, LONDON, E. 3.

SOLID STENCIL INK.

Stencil Plates
 and Brushes.



Also
 "Charbow"
 A Solid Paint.

Contractors to H. M. Government.

Stencil Combinations: in strong tin boxes comprising Stencil Alphabets and Figures in $\frac{1}{2}$ inch sizes, from 1 inch upwards, Ink, Brush and Sponge.

Stencil Outfits: in tin box, containing Ink, Brush and Sponge only.

Solid Stencil Ink: black, in Cakes, sizes from 3 ozs. up to 1 lb. Also in tins, in similar sizes to colours.

Colours: put up in tins only in 3 sizes, from 4 ozs. up to approximately 1 lb.

The Solid Paint is put up in tins only in similar sizes to the Ink.

The Stencil Brushes are in 10 sizes, Nos. 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, the diameter of bristles vary from $\frac{3}{8}$ " to $1\frac{1}{2}$ ".

Prices, subject to fluctuation, to be had of the makers:—Charles Bowman, Ltd., 6, King Street, Tower Hill, London, E.1.

Indent through Shippers.

	PAGE		PAGE
Shan States	109	Sports in India, hockey	764
Shahgarh concession	124	— — — polo	765
Shatt-el-Arab	126	— — — racing	757
Shawl weaving	346	— — — tennis	763
Sholapur Agency	102	Squadron, East Indies	168
Shore, Sir John (Lord Teignmouth)	7	Staff, Governor Generals	17
Shroffs, banking by	278	— — — Governors, Bengal Pres.	42, 43
Siamese Consuls	148	— — — Bombay Pres.	32-33
Siege of Delhi	150	— — — Madras Pres.	35-36
Sikh wars	150	— — — Post Office	681
Sikhs, origin of	150	— — — railway	202
Sikkim State	92	Stamp Duties, Indian	777
Silk	324	Standard reserve, gold	199
Silver	343	Star of India	577
— — — coinage	194	State forest distribution	331
— — — coins	194	— — — irrigation works	229
Sind, irrigation	228	States, Native	79
Sirmur (Nahan) State	108	— — — Akalkot, <i>see</i> Sholapur Agency	102
Sirohi State	88	— — — Alwar	90
Skins, hides, leather	358	— — — Amb	94
Small-cause courts	601	— — — Aundh	102
Small-pox, death from	446	— — — Bahawalpur	106
Smuggling of Cocaine	460	— — — Bajaur	94
Social institutions	398	— — — Baluchistan Agency	85, 86
— — — caste	399	— — — Bansda	103
— — — marriage	400	— — — Bangapalee	96
— — — reforms	8, 399	— — — Banswara	87
— — — societies	533	— — — Baria	102
Societies, Agricultural	475	— — — Baroda	84, 85
— — — Disciple	556	— — — Bastar	110
— — — Ladies	556	— — — Benares	105
— — — Life Insurance	364	— — — Bengal Presidency	103
— — — Literary, Scientific and Social	533	— — — Bharatpur	89
— — — Lutheran	557	— — — Bhavnagar	98
— — — Methodist	558	— — — Bhopal	91
Soil, Bengal Pres.	38	— — — Bhor (Satara Jagirs)	102
— — — Bombay Pres.	29	— — — Bhutan	93
— — — Central Prov.	65	— — — Bijapur Agency	97
— — — Punjab	49	— — — Bikaner	89
— — — United Provinces	44	— — — Bombay Presidency	90
Sokotra Island	77	— — — Bundi	88
South Africa, Indians in	392	— — — Cambay (Kaira Agency)	93
— — — Indian Famine, 1876-8	469	— — — Central India Agency	90
— — — Railways	213	— — — Chamba	105
Southern dynasties	3	— — — Chitra'	94
— — — Indian Chamber of Commerce	376	— — — Cochin	95
— — — Maratha Country States	100	— — — Cooch Behar	103
Spanish Consuls	148	— — — Cutch	97
Specimen tours	70	— — — Daphlapur (Bijapur Agency)	97, 102
Sports in India, athletics	764	— — — Datia	92
— — — Boxing	763	— — — Dhar	92
— — — football	764	— — — Dharwar Agency	97
— — — golf	765	— — — Dharampur	103

F. W. BERK & Co., Ltd., LONDON.

CHEMICALS:— HEAVY—FINE

DRUGS:

ACIDS:
(RANEE BRAND)

**SULPHURIC
MURIATIC
NITRIC**



BAA ACCUMULATOR ACID

IT is important to buy the RIGHT ACID for Accumulators and all Electrical purposes.

BAA is approved by all Electricians.
is guaranteed made from best Sicilian Brimstone and Distilled Water.

Is specially prepared and tested for Electrical purposes.
Is the BEST ACCUMULATOR ACID. Is used the World over.

Sole Manufacturers:

**F. W. BERK & CO., LTD.,
LONDON—ENGLAND.**

WORKS:

ABBAY MILLS CHEMICAL WORKS—STRATFORD.

PENTREPORTH CHEMICAL WORKS—MORRISTON,

S. WALES.

Cables : **"BERK," LONDON.**

	PAGE		PAGE
States, Native, Dhrangadhra	98	States, Native, Nasik Agency	101
— — — — — Dholpur	89	— — — — — Navanagar	99
— — — — — Dir	94	— — — — — Nepal	63
— — — — — Dongarapur	87	— — — — — North-West Frontier	94
— — — — — Faridkot	106	— — — — — obligations of	76
— — — — — Gondal	99	— — — — — Orchha	95
— — — — — Gwalior	91	— — — — — Orissa Feudatory	104
— — — — — Hill Tippera	103	— — — — — Palanpur	101
— — — — — Hyderabad	80, 81	— — — — — Partabgarh	87
— — — — — Idar (Mahi Kantha Agency)	97, 100	— — — — — Patiala	108
— — — — — Indore	91	— — — — — Phaltar	102
— — — — — Jainta Hills	109	— — — — — Political Officers	80
— — — — — Jaipur	88	— — — — — Pudukottai	96
— — — — — Jaisalmer	87	— — — — — Radhampur	101
— — — — — Jamkhandi	100	— — — — — Raigarh	110
— — — — — Janjira (Kolaba Agency)	99	— — — — — Rajpipla	101
— — — — — Jaora	92	— — — — — Rajputana Agency	86
— — — — — Jashpur	110	— — — — — Rampur	105
— — — — — Jath	97, 102	— — — — — Ramdrug	100
— — — — — Jawhar (Thana Agency)	103	— — — — — Rewah	91
— — — — — Jhalawar	88	— — — — — Rewah Kantha Agency	101
— — — — — Jind	107	— — — — — relations with	79
— — — — — Jodhpur	87	— — — — — rights of	79
— — — — — Junagadh	99	— — — — — Rutlam	92
— — — — — Kaira Agency	98	— — — — — Sachin	103
— — — — — Kalat (Baluchistan Agency)	85	— — — — — Sandur	96
— — — — — Kankar	110	— — — — — Sangli	100
— — — — — Kapurthala	107	— — — — — Satara Jagirs	102
— — — — — Karauli	89	— — — — — Savantwada	102
— — — — — Karenni District	109	— — — — — Savanur (Dharwar Agency)	97
— — — — — Kashmir	110, 111	— — — — — Shahpura	89
— — — — — Kathiawar Agency	98	— — — — — Shan	109
— — — — — Khairagarh	110	— — — — — Sholapur Agency	102
— — — — — Kharan Agency	85	— — — — — Sikkim	92
— — — — — Khairpur	97	— — — — — Sirmur (Nahan)	108
— — — — — Khasi (Jainta Hills)	109	— — — — — Sirohi	83
— — — — — Kishangarh	88	— — — — — Southern Mahratta Country	100
— — — — — Kolaba Agency	99	— — — — — Sukkur	102
— — — — — Kolhapur	100	— — — — — Surat Agency	103
— — — — — Kotah	89	— — — — — Surgana (Nasik Agency)	101
— — — — — Kurundwad	103	— — — — — Sirguja	110
— — — — — Las Bela (Baluchistan Agency)	85, 86	— — — — — Tebri	105
— — — — — Lawa	88	— — — — — Thana Agency	103
— — — — — Madras Presidency	95	— — — — — Tonk	88
— — — — — Mahi Kantha	100	— — — — — Travancore	95
— — — — — Maler Kotla	107	— — — — — Udaipur	87
— — — — — Mandi	107	— — — — — under Assam Govt.	109
— — — — — Manipur	109	— — — — — Bihar and Orissa Govt.	104
— — — — — Miraj	100	— — — — — Bengal Govt.	103
— — — — — Mudhol	100	— — — — — Bombay Govt.	96
— — — — — Mysore	82, 84	— — — — — Burma Govt.	103
— — — — — Nabha	107	— — — — — Central India Agency Govt.	90
— — — — — Nandgaon	110	— — — — — Central Provinces Govt.	110



THE
MEN'S
GARTERS
IN
ALL
LEADING
COLOURS.



"BOSTON" AND ALL STYLES.

THE CHILD'S SUSPENDER.

H.W. Velvet Grip



"JACK
AND
JILL."



THE LADIES' SUSPENDER.

H.W. Velvet Grip

And all Styles.

Single and Double Ends,
also Sew-ons.



DEAN-BEDDINGTON MEASURES IN ALL MAKES AND MARKINGS.

For Surveyors, Builders,
London Centimetres and other
Foreign measurements.

TAILORS, DRESSMAKERS AND
SHOE MEASURES.

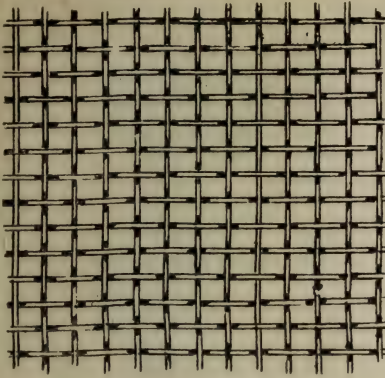


Spring Pocket Tapes.



Agents for Export :—

FREDERICK NEWTON & Co., 8/9, Hamsell Street, London, E. C. 1.



S. RAMSEY & CO.,

Wire Weavers—all meshes.

Wireworkers,

Wire Netting Makers,

Galvanizers.

198-202, St. John Street, E.C.1,
LONDON.

Works: Cyrus St., E.C.1, LONDON.

Telegrams:

Methodical Smith, London.

Telephone:

Holborn 6337 (3 lines)

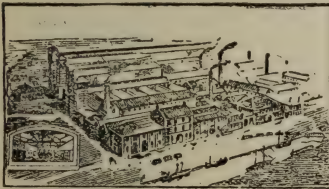
WIRE NETTING & GALVANIZING WORKS:—

St. Paul Street, London, N.1.

Telephone: North 2371.

CROSS'S CELEBRATED FERTILIZERS

SPECIALLY PREPARED FOR THE CULTIVATION OF
RUBBER, TEA, Cocoa, Sugar Cane, Coffee, &c., &c.



PORT DUNDAS, ONE OF OUR CHEMICAL WORKS.

Suppliers of all kinds of Fertilizers:
SULPHATE OF AMMONIA.
NITRATE OF SODA.
NITRATE OF LIME, &c.
SUPERPHOSPHATES, BASIC SLAG,
&c.

Sundry Chemicals:
CREAM OF TARTAR SUBSTITUTES.
PHOSPHORIC ACID.
SOLID PHOSPHORIC ACID FOR
SUGAR-REFINING.

ALEXANDER CROSS & SONS, LTD.

(Established about 100 years.)

Largest Chemical Manure Manufacturers in Scotland.

Registered Office—

19 HOPE STREET, GLASGOW.

Chemical and Fertilizer Works—

PORT DUNDAS, GLASGOW.

CAMELON, GRANGEMOUTH.

Also SYDNEY, CAPE BRETON, CANADA.

Branch Office—

FENWICK CHAMBERS, LIVERPOOL.

Basic Slag Works—

SOUTH BANK, MIDDLESBRO'. CAMELON,

GRANGEMOUTH. SCUNTHORPE, IMMING-

HAM. SYDNEY, CAPE BRETON, CANADA.

Telegraphic Address:—"CROSS, GLASGOW."

Codes:—A.B.C. 5th Edition; Lieber's five-letters; Western Union; and Private.

	PAGE		PAGE
Taxation, incidence of	436	Trade	240
Tea	327	—Aden	78
—capital invested in	327	—Balance of	260
—prices (table)	328	—diagrams of	236
Technical education	414	—direction of	256
Tehri State	105	—Export of the year	247
Telgumouth, Lord (Sir John Shore) ..	7	—French India	116
Telegram Rates	683	—Frontier	258
Telegraph Department	18, 683	—Import of the year	235
—Indo-European	18	—Indian, 1919	232
—appointments	507	—Marks	357
—and Post Office	681	—N.-W. Frontier Province	71
—traffic	684	—opium	354
—revenue	684	—Punjab	50
Telegraphy, Wireless	684	—Frontier	258
Telegu Mission, American Baptist ..	552	—with Allies	258
Telephone statistics	684	—with other countries tables	258
Temperance in Army, effects of ..	560	Traffic, cocaine	460
—Association, Anglo-Indian	560	—railway	209
—Royal Army	559	—telegraph	684
—Conference, All-India	560	Train service, Indian	709
—reform in India	559	—overland	709
Temperature	297	Training Colleges	414
Tender, legal	196	—schools, police	608
Tennis, lawn, in India	763	Trans-frontier trade	258
Territory, Independent	133	Trans-Persian Railway	143
Textile industry, Bombay	309	Transported criminals	612
—United Provinces	44, 45	Travancore	95
Textiles	309	Travel in India	709
—excise duty on	314	Trawling	350
—export trade	312	Treaty of Bassein	7
—Punjab	50	Trend of Provincial Government ..	27
Thana Agency	103	Tribes, Frontier	12
Theft Statistics	610	Tribute, Native States'	112
Tibet	138	Tropical climate and health	447
—Chinese in	139	—diseases	447
—expedition to	139	Trustee, Official	689
—political importance of	140	—Public	688
—Russia and	138	Tucker, Major, on tropical diseases ..	447
Tibetan Mission	555	Turkish Consul	148
Tidal Constants	700	Turkish railway guarantee	143
Timber for matches	334	Turko-Iranian people	380
—production	332	Tuticorin Marine Fish Farm	382
Timbers, Indian	332	Typhoid Fever	450
<i>Times of India</i>	522	—causes of	450
Tin	343	—prevention of	450
Tirah Campaign	11	—treatment of	451
Titles and Names, Indian	597		
Tobacco, Bihar and Orissa	62		
—Indian	461		
Tonk State	88		
Tonnage, railway	208		
Towns and villages	384		
—Presidency	436		

“LIGNOLITE” WOOD PRESERVATIVE

As supplied to the Indian Forestry Dept.

NON-POISONOUS.

Protects timber against the ravages of

WHITE ANTS — TEREDOS — ROT — DECAY — FUNGUS.

Supplied in Two Colours—**BROWN** and **GREEN.**

“MASTICO” BITUMINOUS SOLUTION

for the preservation of Iron and Steel Structures of every description, and is specially recommended for Galvanized Sheets.

“Mastico” is manufactured from the finest Bitumen only and is **GUARANTEED FREE FROM COAL TAR** and similar products.

“MASTICO” VARNISH PAINTS

are manufactured from the finest materials obtainable, and consequently outlast cheap paints many times over.

These paints are specially **RECOMMENDED** for **EXPOSED STRUCTURES** which require **SPECIAL PROTECTION**, such as Gasometers, Bridges, Buildings, etc.

“BREALA” ENGINEERING SHEETING

for waterproofing Reservoirs, Dams, Swimming Baths, Aquaducts, Filter Beds, Culverts, Tanks, Railway Bridges, Expansion Joints, etc.

SOLE MANUFACTURERS:

W. H. KEYS, LIMITED,

Cable Address: **WEST BROMWICH,**
OIL
West Bromwich.

ENGLAND.

Code :
A B C
5th Edition.

	PAGE		PAGE
U			
Udaipur State	87	Universities, Patna	438
United Free Church of Scotland..	551	—reform	416
—Presbyterian Church of North Ame- rica Mission	553	—senates	416
United Provinces administration ..	45	Upper India Chamber of Commerce ..	476
—area	44	Urban tendencies	384
—Chamber of Commerce..	377	Uruguay Consul	148
—Collectors.. .. .	45	U. S. A. Consuls	148
—Colleges	47		
—Council	47	V	
—Courts of Justice	45	Vellore, mutiny at	149
—Deputy Commissioners..	45	Vend, right of (excise system)	183
—District boards	45	Vernacular Press Act repealed	542
—districts	45	Vertiver (cus-cus)	438
—Ecclesiastical Department ..	548	Veterinary Department, Indian Civil ..	284
—educational progress	411	—appointments	568
—factories.. .. .	45	Viceroyalty, instituted	10
—hospitals.. .. .	47	—of Lord Chelmsford	18
—Judicial Department	605	—of Lord Curzon.. .. .	12
—land tenure	44	—Lord Minto	12
—languages.. .. .	44	Viceroy (Baron) Hardinge.. .. .	18
—Legislative Council	640	Viceroy's of India	21
—Lieutenant-Governors	48	Viceroy's term extended	15
—Medical Dept.	47	Victoria Cross	755
—Minerals.. .. .	44	Village autonomy	434
—Municipalities	45	Villages, occupations in	404
—natural products	44	—towns and	384
—officials	47-48	Virangam, riots in	1
—police	46	Visit of King and Queen.. .. .	18
—population	44	Vizagapatam Harbour Project	468
—religions.. .. .	44		
—revenue	46	W	
—roads and buildings	46	Wages and Income (table)	281
—schools	46	Wales, Prince of, tour	10
—soil	44	Wandewash, Battle of	145
—States under	105	War, European, and India	13
—Textile industry	45	—and gold reserve.. .. .	196
Universal marriage.. .. .	400	—and paper currency	196
Universities established	412		
—courses.. .. .	410		
—Dacca	418		
—education	414		
—Mahomedan	418		
—Mysore	418		
—Nagpur scheme.. .. .	67		

Complete Plants are our speciality for the following trades, as supplied to the leading British Manufacturers :—

Sheet Metal Hollow-ware.

Sheet Metal Travelling Trunks.

Bucket Making Machinery and Galvanizing Plants, Corrugating Plants, Edge Tool Making Machinery, Spade and Shovel Making Machinery, Bolt and Nut Making Machines, Safe Making Plants, Horse Shoe Making Plants, Washer Cutting Presses.

Lock, Latch and Bolt Making Plants, Drop Forging Plants.

Makers of all kinds of Presses, Stamps, Shears and Metal Working Machinery, Dies, Tools.

Rolling Mills, Aircraft Rolling and Swaging Machinery, Sheet Stretching and Flattening, Hydraulic and Multiple Roller type, Riveting Machines.

DANIEL SMITH, LIMITED,
CASTLE IRON WORKS,
Peel Street and Raglan Street,
WOLVERHAMPTON, ENGLAND.

Telegrams : "PRESSES,"
Wolverhampton.

Telephone : No. 210,
Wolverhampton,

“EMESCO” Brand PAINTS

DURABLE IN ALL CLIMATES

“AKSELLO” Brand LUBRICANTS

For Motor Cars, Shafting and all **Bearings**.
Guarantee smooth running, and
Maximum power, with minimum wear.

“LANTYCK” Brand DRY CLEANING SOAP

Imparts a bright and lustrous finish. White
goods retain their original purity.

MONTGOMERIE STOBO & Co., Ltd.,

VICTORY PAINT, OIL,

GREASE & SOAP WORKS,

George Street, Bridgeton, GLASGOW.

Cables—“VASELINE” Glasgow.

Codes—A.B.C. 5th Edition,
Bentley's Complete Phrase,
Marconi's International.

**Branches:—Calcutta; also Alexandria, Egypt; Adelaide,
Australia; Wellington, New Zealand.**

KELITE

**BLOW LAMPS, BRAZING LAMPS,
PORTABLE BRAZING OUTFITS, Etc:**

Made in Steel or Brass
to burn Paraffin or
Spirit.
Safest and Strongest on
the Market.

Our Portable Brazing
Outfit will melt 1" bar
copper in 6 minutes.

Blow Lamps, Oil Engine
Starting Lamps and
Brazing Appliance
supplied in all sizes.



Type "No. 1" Blow Lamp.

We are Manufacturers of the famous Incandescent
Oil Lamps and Stoves.

IN USE ALL OVER THE WORLD.

WRITE FOR CATALOGUE.

See the Word "**KELITE**" for British
Manufacture.

Kitson-Empire-Lighting Co., Ltd.,

STAMFORD,

TELEGRAMS :—

"YAPORIFIC, STAMFORD."

ENGLAND.

KELITE

INCANDESCENT OIL LAMPS.

We manufacture Lamps for inside and outside use in units from 100 to 1,200 C. P.

**Best, Safest, Strongest
in the World.**

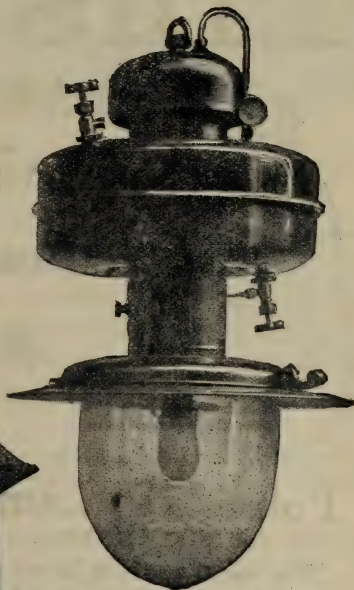
Also **"KELITE"**

**Blow Lamps, Brazing Lamps,
Oil Engine Starting Lamps
Portable Brazing Outfits
and "KELITE" Vapour
Stoves.**

**THOUSANDS IN USE ALL OVER
THE WORLD.**



Type "D1."



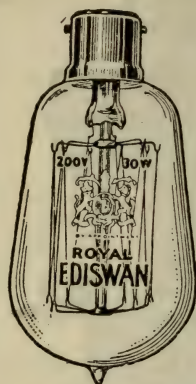
Type "A1."

**WRITE FOR
ILLUSTRATED
CATALOGUES.**

Sole Manufacturers :
The Kitson-Empire-Lighting Co., Ltd.,
Stamford, ENGLAND.

Telegrams :- "Vaporific, Stamford."

Royal EDISWAN LAMPS.



Drawn Wire & Half Watt Type.

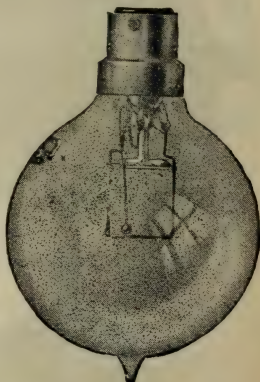
MAXIMUM ILLUMINATION
AT
MINIMUM COST.

Pointolite Lamp (TUNGSTEN ARC).

The most perfect lamp of
Point-source illumination.

For Lantern Projection,
Photo-Micrography,
Enlarging,
Surgery — and all
operations requiring
a small light
source of intrinsic
brilliancy.

Ensures
Constant
Uniform
Illumination
Without
Attention.



THE EDISON SWAN ELECTRIC CO., LTD.,

Telephone:
No. 520 ENFIELD.

PONDERS END, MIDDLESEX.

Telegrams:
EDISWAN, ENFIELD

Agents for INDIA: BALMER, LAHRIE & CO., Clive Street, Calcutta.

English—Ediswan—Everything—Electrical.

TONIDES CIGARETTES

THE ROBERT SINCLAIR TOBACCO COMPANY, Ltd.,
are prepared to appoint reliable **Selling Agents**
throughout India wherever vacancies exist.

TONIDES Cigarettes mark an event in cigarette making—the return to the sound old English standard of “highest quality and skilled hand-making.” Packed in air-tight tins.



Write stating territory covered and with references to

The Robert Sinclair Tobacco Co., Ltd.,
Manufacturers of Tobacco and Snuff,
Blenheim St., Newcastle-on-Tyne, Eng.

Telegrams: “Tobacco, Newcastle-on-Tyne.”
Codes: A B C 5th and Marconi.

PAINT

**Anti-fouling, Anti-corrosive, Acid
resisting, Insulating.**

No renewals in 5 years on construction work.

LEAKY ROOFS

Felts, Zinc, rust holed Iron, etc.
Made Waterproof. Roofs treated
7 years ago sound.



CUIRASS PRODUCTS, Ltd., LONDON.

Makers of Damp Course—Damp Proof for Walls, Floors, etc.
Wood Preservative.

Agents—

CALCUTTA : Ewing & Co.

BOMBAY : Shalebhoy Tyebjee & Sons.

MADRAS : Wilson & Co.

GUEST & CHRIMES, LTD.,

Foundry & Brass Works, ROTHERHAM.

(On Admiralty, War Office, and Crown Agents' Lists.)

ORIGINAL MANUFACTURERS OF

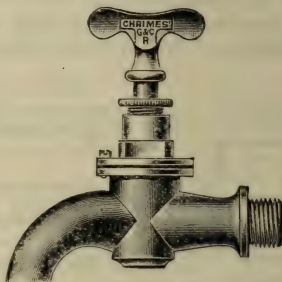
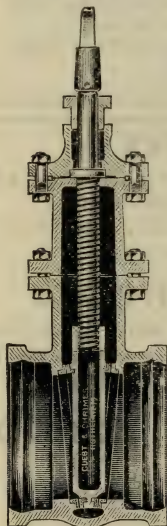
Established 1840.

**CHRIMES' HIGH PRESSURE LOOSE
VALVE SCREW-DOWN COCKS.**

Telegrams : "Cuest, Rotherham."

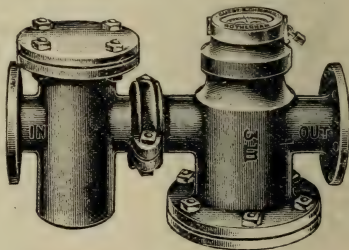
Telephone : 205, Rotherham.

GUEST & CHRIMES'
IMPROVED SLUICE VALVES
For Water, Steam, Sewage & Gas,



**GUEST & CHRIMES' TURBIN
WATER METERS.**

3/4 in. to 18 in. sizes. 280,000 supplied.



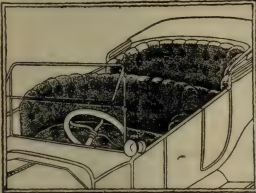
**ALSO MANUFACTURERS OF
RESERVOIR VALVES and FITTINGS,
FIRE EXTINGUISHING APPARATUS,
GENERAL PLUMBERS' GOODS,
HIGH POWER INCANDESCENT
LAMPS, WET and DRY GAS METERS,
and GAS FITTINGS.**

TEMPORARY LONDON OFFICE :

4 & 5, Adam Street, Adelphi, W.C.



For Upholstering Furniture.



For Upholstering Motor Cars.



is a faithful reproduction of leather in all grains and colourings, and can be used for practically all purposes that leather is used for.

It costs only one quarter the price of leather and wears infinitely longer. It is most suitable for hot climates being insect and germ proof, and is also scratch, stain, grease and water proof.

REXINE, Ltd., Hyde, Manchester,
ENGLAND.

Agents in India :

BOMBAY : L. & F. Barraclough & Co., Ltd., Cook's Buildings, Hornby Road.

CALCUTTA : L. Saubolle & Co., 7, Wellesley Place.

MADRAS : Wilson & Co., 3/8, Jehangir Street.

“INDIAN MOTORING.”

Dealing with matters of motor interest from all parts of the world but particularly with India.

Issued free every Wednesday as a Supplement to
“The Times of India” *Daily Edition*.

May be subscribed for separately at the following rates :—

Great Britain, Europe and America.

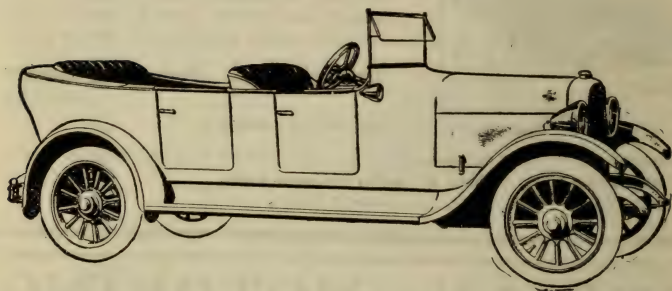
Ten Rupees per annum, including postage.

India, Burma and Ceylon.

Eight Rupees per annum, including postage.

The AUSTIN "TWENTY"

The car of all the comforts in
every clime.



Every provision is made in the design of the "AUSTIN TWENTY" for comfort and dependability. An ample cooling system provides for efficient running in the hottest climate. The lines of the body-work are smart and distinctive, while the engine always maintains a reserve of power for all emergencies.

Fullest particulars and catalogues on application to—

THE AUSTIN MOTOR Co., Ltd.,

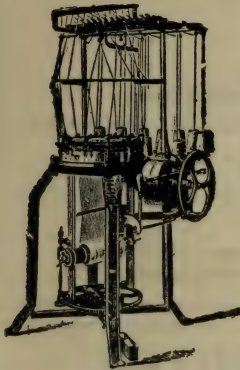
Export Department,

477-483, Oxford Street, LONDON, W. 1

or any Agent. Austin agents are everywhere.

THE HARRISON PATENT KNITTING MACHINE Co., Ltd.

MANCHESTER, England.



**Undervest Machine
for Undervests,
Jerseys and Sweaters.**

**Manufacturers of
HOSIERY & KNITTING MACHINERY,
REELERS, BALLERS, LINKERS.**

GAS MANTLE MACHINES.

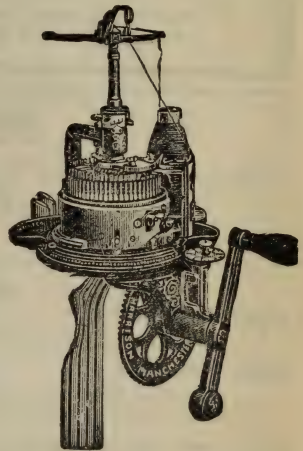
**WINDERS,
RIB HEAD
AUTO
MACHINES**

AND

PLAIN MULTIPLE FEED

POWER MACHINES

**Producing HIGH QUALITY
FABRICS—OUR OWN BUILD.**



**"Harrison" Sun Ribber, for
Hose and Half-Hose.
(Power or Hand Drive.)**

Agents :

**W. H. BRADY & Co., Ltd.,
BOMBAY and CALCUTTA.**

TELEGRAPHIC CODES

HAMEL'S International AUTOCODE

The safest and simplest method for converting
FIGURES from Private Codes into artificial
 words; self-checking by a mechanical device.

A full 10-figure range (exclusive of check) available for Code purposes.

The Check cannot be mutilated.

£2 per copy net.

Published by—

RUPERT M. S. KAY,
 82, Daisy Bank Road, Victoria Park,
MANCHESTER, ENGLAND

Tel. Address "AUTOCODE, Manchester."

ALL WELL KNOWN CODES SUPPLIED. PRIVATE CODES COMPILED

AGENTS IN INDIA:

THACKER & Co., Ltd., 27, Esplanade Road, BOMBAY.

THACKER SPINK & Co., 5-6, Grosvenor Place, CALCUTTA.

H. C. SMITH, LIMITED,

**Shoe, Leather and Textile Warehousemen,
 BIRMINGHAM.**

DEPARTMENTS—**BOOTS and SHOES—**

All grades and descriptions of reliable Footwear.

SHOE MERCERY—

Including Boot and Shoe Laces, Socks, Rubber Heels, Boot Protectors, Boot Polishes, and all sundries required in a Boot Department.

LEGGINGS and GAITERS, LEATHER GOODS—

Brief, Kit, Gladstone and other Travelling Bags, Suit Cases, Cabin Trunks, Dress Baskets, Ladies' Fancy Bags, Belts, Purses, Straps, &c., &c.

TEXTILE GOODS—

Hosiery, Jerseys, Underwear, Gloves, Shirts, Braces, Raincoats, Waterproofs, Costumes, Dress Skirts, Underskirts, Robes, Umbrellas, Blouses, Corsets, Camisoles, Handkerchiefs, Overalls, Ties and Fancy Neckwear.

Wholesale and Export only Price Lists issued.

Indian Motoring

SUPPLEMENT TO
The Times of India

The Indian Motoring Supplement

to "The Times of India" is the only publication of its kind in India and as such it appeals both to the Motorist and to the Agent who has Cars or Motor Cycles for Sale.

Its Literary Contents are very carefully selected and they invariably include a considerable proportion of news that is of direct interest to Motorists in India. In addition there are frequent Technical articles written by the foremost Motoring Journalists of the day.

INDIAN MOTORING

Is issued free every Wednesday as a Supplement to the Daily Edition of "The Times of India," and it may also be subscribed for separately for Eight Rupees per annum Post Free in India, Burma and Ceylon, and for Ten Rupees per annum Post Free to any other part of the World.

"THE TIMES OF INDIA" OFFICES

BOMBAY

CALCUTTA

LONDON

“India is one of the wonders of the World. Is there any field for British enterprise more likely to yield good results than India?”

SIR GEORGE HOUSTON REID

(*Ex-Prime Minister of Australia*), To “*The Times of India*.”

The trader in India regards advertisements as one of his most valuable means of obtaining useful commercial information; and the consumer finds in them a guide to the best means of satisfying his needs and desires.

For these reasons advertisements intended for publication in India cannot be made too informative, clear and concise. They will come before the notice of people who are, nearly all of them, genuinely interested in learning everything that can be told them about the goods offered for sale

ADVERTISE IN
The Times of India
Illustrated Weekly.

ALCOCK ASHDOWN & Co., Ltd.,

(INCORPORATING CHARLES BROWN & Co.)

ENGINEERS—BOMBAY.

ON GOVERNMENT LIST.

Established 1860.



-Constructional Engineers, Ship, Barge and Launch Builders, Boilermakers, Coppersmiths, Iron and Brass Founders, Timber Merchants and Store Suppliers. All classes of work done, Steel and Cast-Iron Tanks, Bridges, Steel Frame Buildings, Etc. Etc.

OXACETYLENE & ELECTRIC WELDING & CUTTING.

Sole Agents for—

RED HAND COMPOSITIONS Co., Ltd.,
Antifouling and Anticorrosive Compositions and Paints.

SAUNDERSONS BROS. & NEWBOULD Co., Ltd.,
Tool-Steels, Files, Saws, Etc.

SMALL & PARKES Co., Ltd., "Karmal" Engine Packings
and "Roko" Beltings.

SHALIMAR ROPE WORKS, Manilla Ropes and Twines.

U. S. MOTOR TRUCK Co., Ltd., Motor Trucks and Lorries.

THORNYCROFT MARINE MOTORS in Stock.

*Managing Agents :—***TURNER, MORRISON & Co., Ltd.**

BY APPOINTMENT TO
HIS MAJESTY THE
KING EMPEROR.



BY APPOINTMENT TO
H. E. LORD CHELMSFORD,
VICEROY OF INDIA.

GENERAL

Accident Fire and Life

ASSURANCE CORPORATION, Ltd.

(Incorporated in Great Britain.)

Established
1885.

Assets exceed
Rs. 3,75,00,000

Business Transacted—

FIRE.

Personal effects and property of every description insured on the most favourable terms.

MOTOR CAR.

Comprehensive policies covering all risks at lowest premiums

HORSE.

Horses insured against death from accident or disease at low rates.

ACCIDENT & SICKNESS.

The most comprehensive policy obtainable in the East. Premium payable quarterly.

BURGLARY & THEFT.

Special policy for Insurance of household goods and personal effects.

DRIVING ACCIDENTS.

All kinds of vehicles insured against damage and third party risks.

ALSO

**FIDELITY GUARANTEE, PLATE GLASS,
BICYCLE & LIFT INSURANCES.**

For prospectuses and full particulars apply to—

INDIAN BRANCH.—12-14, Church Gate St., BOMBAY.

Manager for India—G. M. ROSE.



UNIVERSITY OF ILLINOIS-URBANA

315.4 IN2 C001 v.7(1920)

Times of India directory of Bombay (city)



3 0112 087686272